TRANSPORTATION IMPROVEMENT PROJECT

PLAN AND PROFILE OF

MONTELLO STREET

IN THE TOWN OF

CARVER PLYMOUTH COUNTY

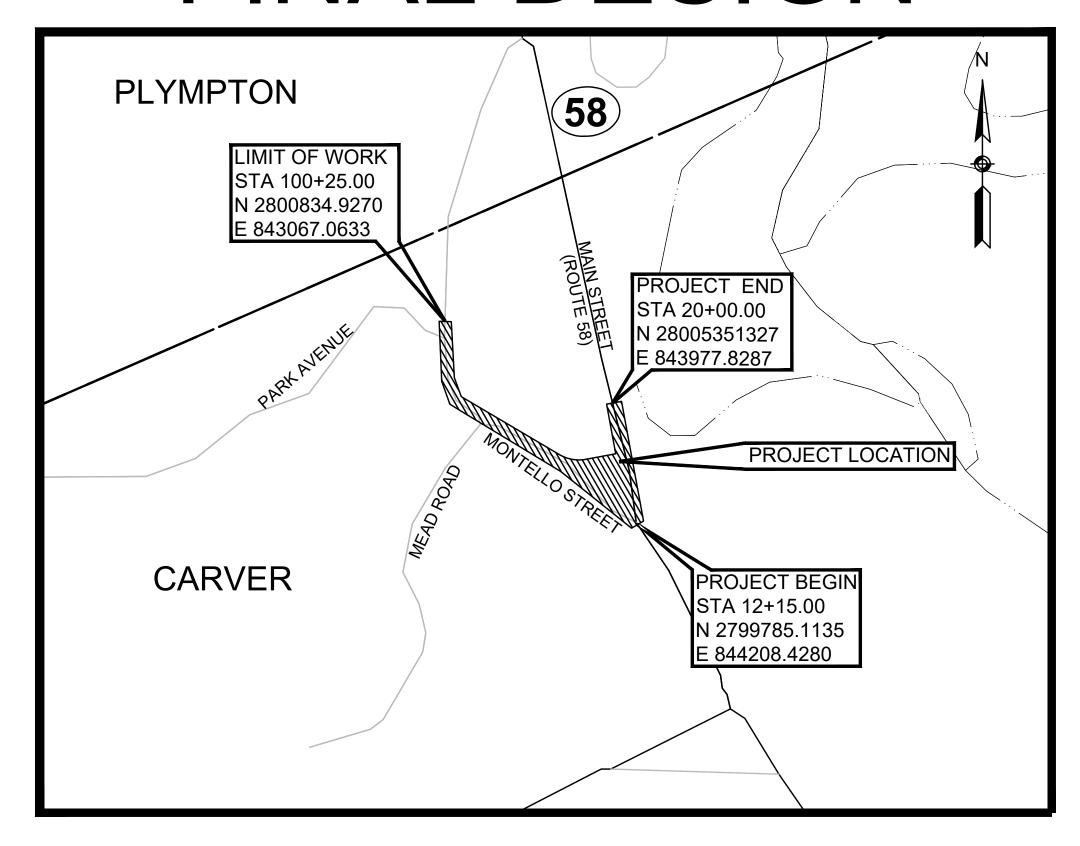
REFERENCE MANUALS

THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

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FINAL DESIGN



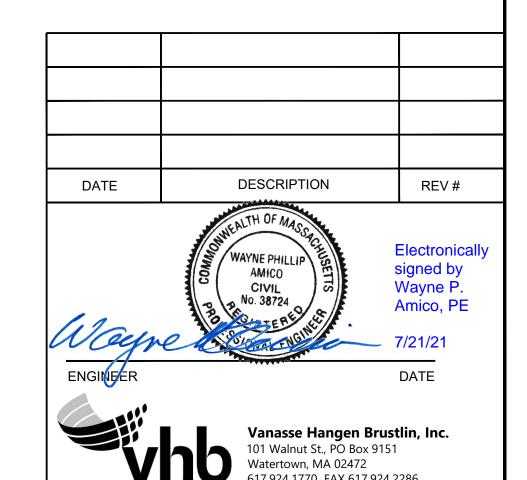
0 500 1000 1500 200 SCALE: 1" = 500'

DESIGN DESIGNATION (ROUTE 58)

DESIGN SPEED	50 MPH
ADT (2017)	12,600 VPD
ADT (2025)	21,000 VPD
K	10%
D	50.1%
T (PEAK HOUR)	5.0%
T (AVERAGE DAY)	5.2%
DHV	2,000 VPH
DDHV	1,000 VPH
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL

DESIGN DESIGNATION (MONTELLO STREET)

DESIGN SPEED	35 MPH
ADT (2017)	200 VPD
ADT (2025)	8,600 VPD
K	13%
D	58.5%
T (PEAK HOUR)	5.2%
T (AVERAGE DAY)	5.1%
DHV	1,150 VPH
DDHV	650 VPH
JNCTIONAL CLASSIFICATION	LOCAL



DESIGNED BY	APPROVED BY	SHEET OF
JLS	WPA	1 61
DRAWN BY GPM	DFTG CHECKED BY JLS	VHB CAD FILE NAME 12681.06_HD(COV).DWG
CHECKED BY SHK	DATE JULY 2021	JOB NO. 12681.06

CARVER

MONTELLO STREET

SHEET 2 OF 61

——— STATE HIGHWAY LAYOUT TOWN OR CITY LAYOUT — COUNTY LAYOUT

—— — P.—— ——

— — — — — — EASEMENT

TOWN OR CITY BOUNDARY LINE

PROPERTY LINE OR APPROXIMATE PROPERTY LINE

GENERAL SYMBOLS	3		TRAFFIC SYMBOLS		
EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION
☐ JB	 JB	JERSEY BARRIER	Ø1	Ø1	CONTROLLER PHASE
⊞ ⊕ 曲 CB _□_	СВ	CATCH BASIN CATCH BASIN CURB INLET			WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
	$\overline{\overline{\overline{\overline{\overline{\overline{\overline{\overline{\overline{\overline{\overline{\overline{\overline{\overline{\overline{\overline{\overline{\overline{$	FLARED END SECTION			QUADRUPOLE WIRE LOOP DETECTOR
		FLAG POLE			BICYCLE WIRE LOOP DETECTOR, TYPE B-2
G GP □ MB	☐ GP □ MB	GAS PUMP MAIL BOX			VIDEO DETECTION ZONE
		POST SQUARE			RADAR DETECTION ZONE
	0	POST CIRCULAR			VIDEO DETECTION CAMERA
⊕ WELL □ EHH	⊕ WELL □ EHH	WELL ELECTRIC HANDHOLE		<u> </u>	RADAR/VIDEO VEHICULAR DETECTION
0	0	FENCE GATE POST	⊕	•	
o GG	O GG	GAS GATE			PEDESTRIAN PUSH BUTTON, SIGN AND SADDLE
⊕ BHL # ⊕ MW #	◆ BHL # → MW #	BORING HOLE MONITORING WELL	\$	*	EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
₩ # TP #	Ψ WW# ■ TP#	TEST PIT		→ +>	VEHICULAR SIGNAL HEAD, WITH/WITHOUT BACKPLATE
φ	P	HYDRANT			VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED, WITH/WITHOUT BACKPLATE
*	*	LIGHT POLE COUNTY BOUND	\rightarrow $+$ \rightarrow	→ +>	FLASHING BEACON, WITH/WITHOUT BACKPLATE
□ CO.BD.		GPS POINT	-	-	PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
©	©	CABLE MANHOLE	0.75	•	SIGNAL POST AND BASE
(D)	©	DRAINAGE MANHOLE	O	•	MAST ARM, SHAFT AND BASE
(E) (G)	© ©	ELECTRIC MANHOLE GAS MANHOLE	$\overline{\bigcirc}$	•	SIGN AND POST
M	(M)	MISC MANHOLE	00	••	SIGN AND POST (2 POSTS)
<u>s</u>	<u>s</u>	SEWER MANHOLE	Т	Т	OVERHEAD SIGN
(T) (W)	① W	TELEPHONE MANHOLE WATER MANHOLE		—	OPTICAL PRE-EMPTION DETECTOR
■ MHB	■ MHB	MASSACHUSETTS HIGHWAY BOUND		S	CONTROL CABINET, GROUND MOUNTED
- MON		MONUMENT		•	PULL BOX 12"x12" (OR AS NOTED)
□ SB ■ TB		STONE BOUND TOWN OR CITY BOUND		_	ELECTRIC HANDHOLE - SD2.022 (OR AS NOTED)
Δ		TRAVERSE OR TRIANGULATION STATION			
	→ TPL or GUY	TROLLEY POLE OR GUY POLE		=====	TRAFFIC SIGNAL CONDUIT
∘ HTP -&- UFB	- ბ - UFB	TRANSMISSION POLE UTILITY POLE W/ FIREBOX			
-\f- UPDL	-∳ UPDL	UTILITY POLE WITH DOUBLE LIGHT			
-δ- ULT	-&- ULT	UTILITY POLE W / 1 LIGHT			
-≎- UPL	-⊶ UPL	UTILITY POLE BUSH			
•SIZE & TYPE		TREE			
0		STUMP (MARCH			
• WG	• WG	SWAMP / MARSH WATER GATE			
• PM	• PM	PARKING METER			
		- OVERHEAD CABLE/WIRE			
		= CURBING - CONTOURS (ON-THE-GROUND SURVEY DATA)			
<u></u>		– CONTOURS (PHOTOGRAMMETRIC DATA)	PAVEMENT MARKING	SS SYMBOLS	
		- UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)	-		
		 UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER) UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER) 	EXISTING	PROPOSED	DESCRIPTION
		- UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)		•1	PAVEMENT ARROW - WHITE
		 UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER) UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER) 	ONLY	ONLY	LEGEND "ONLY" - WHITE
		BALANCED STONE WALL		SL	STOP LINE - 12"
	1 1 1	GUARD RAIL - STEEL POSTS		<u>cw</u>	CROSSWALK - 12"
		- GUARD RAIL - WOOD POSTS		SWL	SOLID WHITE LINE - 4"
		– GUARD RAIL - DOUBLE FACE - STEEL POSTS – GUARD RAIL - DOUBLE FACE - WOOD POSTS		SYL	SOLID YELLOW LINE - 4"
	x	- CHAIN LINK OR METAL FENCE		BWL	BROKEN WHITE LINE - 4"
		– WOOD FENCE ·EROSION CONTROL BARRIER		DBYL	DOUBLE YELLOW LINE - 4"
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					
-		- SAWCUT LINE			
-		<ul> <li>TOP OR BOTTOM OF SLOPE</li> <li>LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY</li> </ul>			
		BANK OF RIVER OR STREAM			
		BORDER OF WETLAND			
		100 FT WETLAND BUFFER			
		200 FT RIVERFRONT BUFFER  STATE HIGHWAY LAYOUT			

# **ABBREVIATIONS** GENERAL AADT ABAN ADJ

CB

ANNUAL AVERAGE DAILY TRAFFIC

ADJUST APPROX. **APPROXIMATE** A.C. ASPHALT CONCRETE ASPHALT COATED CORRUGATED METAL PIPE

BIT. BITUMINOUS **BOTTOM OF CURB** BD. BOUND **BASELINE BLDG** BUILDING BM BENCHMARK ВО BY OTHERS **BOS BOTTOM OF SLOPE** BR. BRIDGE

ABANDON

**CBCI** CATCH BASIN WITH CURB INLET CC CEMENT CONCRETE **CCM CEMENT CONCRETE MASONRY** 

CATCH BASIN

CEM CEMENT CI CURB INLET CIP CAST IRON PIPE CLF CHAIN LINK FENCE CL CENTERLINE **CMP** CORRUGATED METAL PIPE **CSP** CORRUGATED STEEL PIPE

CO. COUNTY **CONC** CONCRETE CONT CONTINUOUS **CONST** CONSTRUCTION CR GR CROWN GRADE DHV DESIGN HOURLY VOLUME DI DROP INLET

DIA DIAMETER DIP **DUCTILE IRON PIPE DMH** DRAINAGE MANHOLE DW STEADY DON'T WALK - PORTLAND ORANGE

DWY DRIVEWAY ELEV (or EL.) ELEVATION **EMBANKMENT EDGE OF PAVEMENT** 

EXIST (or EX) EXISTING **EXC EXCAVATION** FRAME AND COVER F&G FRAME AND GRATE FDN. FOUNDATION

FES FLARED END SECTION **FLDSTN** FIELDSTONE GAR GARAGE GD GROUND GG GAS GATE GI **GUTTER INLET** GIP **GALVANIZED IRON PIPE** 

GRANITE

**GRAVEL** 

**GRAN** 

**GRAV** 

P.G.L.

GRD GUARD **HDW HEADWALL** HMA HOT MIX ASPHALT **HOR** HORIZONTAL HYD **HYDRANT** INV INVERT **JCT** JUNCTION LENGTH OF CURVE LB LEACH BASIN LP LIGHT POLE LT LEFT MAX MAXIMUM MB MAILBOX MH MANHOLE

MHB MASSACHUSETTS HIGHWAY BOUND MIN MINIMUM

NIC NOT IN CONTRACT NO. NUMBER ocs OUTLET CONTROL STRUCTURE

PC POINT OF CURVATURE PCC POINT OF COMPOUND CURVATURE **PERF** PERFORATED

PROFILE GRADE LINE

POINT OF INTERSECTION POC POINT ON CURVE POT POINT ON TANGENT PRC POINT OF REVERSE CURVATURE

PROJ PROJECT PROP PROPOSED

**PSB** PLANTABLE SOIL BORROW PT POINT OF TANGENCY PVC POLYVINYL CHLORIDE

### ABBREVIATIONS (cont.)

**GENERAL** PVC POINT OF VERTICAL CURVATURE PVI POINT OF VERTICAL INTERSECTION PVT POINT OF VERTICAL TANGENCY **PVMT** 

PAVEMENT PWW PAVED WATER WAY RADIUS OF CURVATURE R&D REMOVE AND DISPOSE RCP REINFORCED CONCRETE PIPE

RD ROAD **RDWY ROADWAY** REM **REMOVE** RET RETAIN **RET WALL** RETAINING WALL ROW RIGHT OF WAY RR RAILROAD R&R REMOVE AND RESET

R&S REMOVE AND STACK RT RIGHT STONE BOUND **SHLD** SHOULDER SMH **SEWER MANHOLE** ST STREET STA STATION

SSD STOPPING SIGHT DISTANCE SHLO STATE HIGHWAY LAYOUT LINE

SW SIDEWALK TANGENT DISTANCE OF CURVE/TRUCK %

TAN **TANGENT TEMP** TEMPORARY TC TOP OF CURB TOS TOP OF SLOPE TYP **TYPICAL** UP **UTILITY POLE** VAR VARIES VERT **VERTICAL** VC VERTICAL CURVE WCR WHEEL CHAIR RAMP

WG WATER GATE WIP WROUGHT IRON PIPE WM WATER METER/WATER MAIN

# TRAFFIC SIGNAL

CAB. CABINET **CCVE** CLOSED CIRCUIT VIDEO EQUIPMENT DW STEADY DON'T WALK **FDW** FLASHING DON'T WALK FR FLASHING CIRCULAR RED  $\leftarrow$  FR-FLASHING RED LEFT ARROW — FR-FLASHING RED RIGHT ARROW FY FLASHING CIRCULAR YELLOW  $\leftarrow$  FY-FLASHING YELLOW LEFT ARROW  $-\mathsf{FY}$ FLASHING YELLOW RIGHT ARROW STEADY CIRCULAR GREEN ←g-STEADY GREEN LEFT ARROW  $-G\rightarrow$ STEADY GREEN RIGHT ARROW GSL STEADY GREEN SLASH LEFT ARROW **GSR** STEADY GREEN SLASH RIGHT ARROW STEADY GREEN VERTICAL ARROW OL OVERLAP PED

PEDESTRIAN PTZ PAN, TILT, ZOOM STEADY CIRCULAR RED ⊢R− STEADY RED LEFT ARROW  $-R\rightarrow$ STEADY RED RIGHT ARROW TR SIG TRAFFIC SIGNAL TSC TRAFFIC SIGNAL CONDUIT STEADY WALK STEADY CIRCULAR YELLOW **←**Y− STEADY YELLOW LEFT ARROW

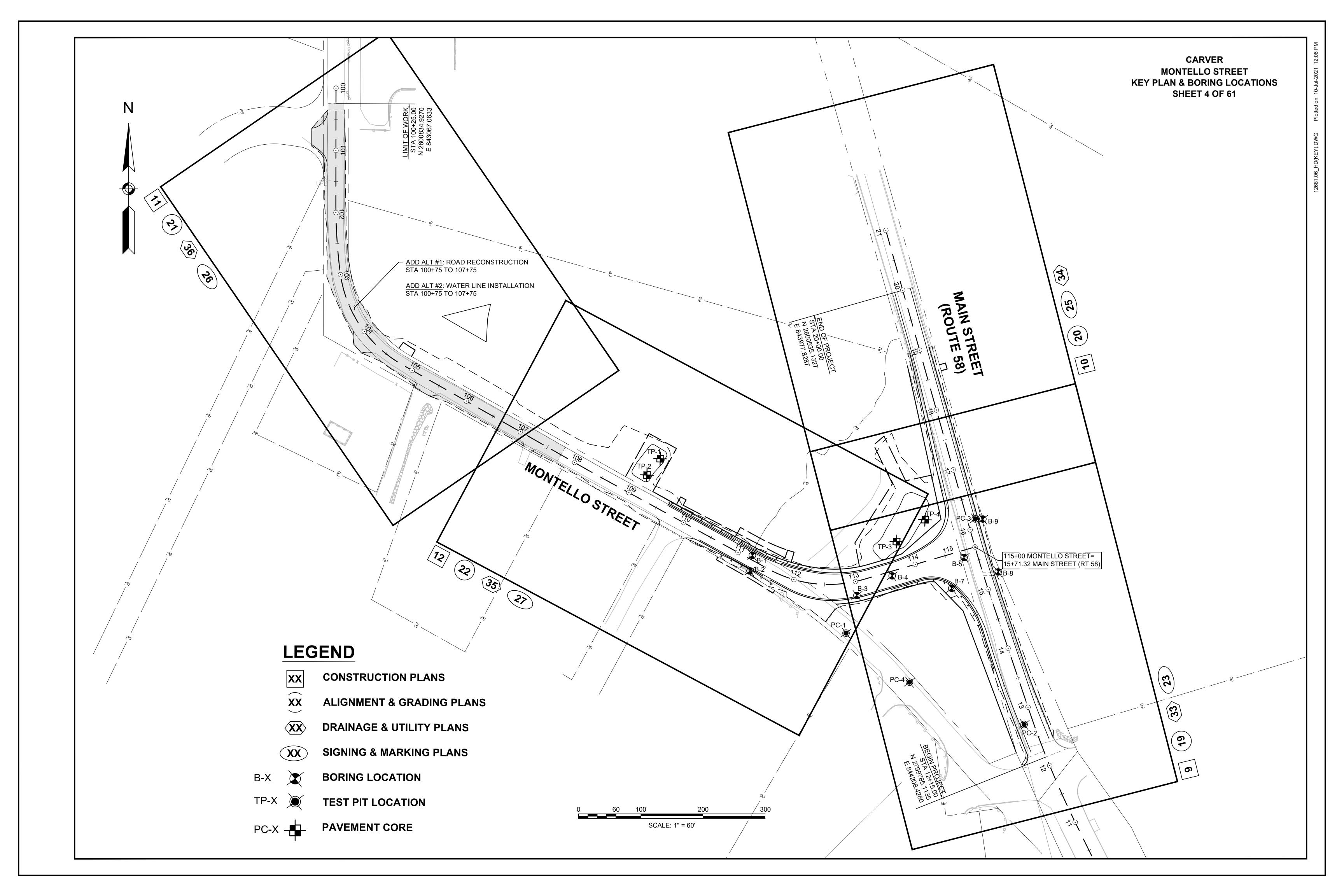
STEADY YELLOW RIGHT ARROW

 $-Y\rightarrow$ 

**CARVER** MONTELLO STREET **LEGEND & ABBREVIATIONS** SHEET 3 OF 61

# **GENERAL NOTES:**

- 1. EXISTING CONDITIONS AND TOPOGRAPHICAL INFORMATION FROM AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC. BETWEEN JUNE 2020 AND OCTOBER 2020.
- 2. THE HORIZONTAL CONTROL IS BASED ON THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM AND THE NATIONAL GEODETIC SURVEY (NAD83). ALL ELEVATION IS US FEET, REFERENCED TO THE NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD88).
- 3. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND GRADES IN THE FIELD BEFORE COMMENCING WORK AND PROMPTLY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- 4. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- 5. DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE & GRADE UP TO A DEPTH OF 5' SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5' WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.
- 6. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH PROPOSED CONDUIT AND SIGNAL EQUIPMENT. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER.
- 7. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- 8. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE AND SEWER STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK.
- 9. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
- 10. EXISTING UTILITY POLES WILL BE RELOCATED BY OTHERS IF REQUIRED.
- 11. TREES AND SHRUBS WITHIN THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.
- 12. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
- 13. THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
- 14. JOINTS BETWEEN NEW ASPHALT CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH HMA JOINT SEALER AND BACKSANDED.
- 15. AFTER MILLING OPERATIONS AND PRIOR TO PAVING THE SUPERPAVE INTERMEDIATE OR SURFACES COURSES THE ENGINEER SHALL EVALUATE THE MILLED SURFACE AND SHALL APPLY THE APPROPRIATE REPAIR METHOD IF REQUIRED.
- 16. EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND STACKED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- 17. ALL PROPOSED HOT MIX ASPHALT BERM SHALL BE MASSDOT TYPE A-MODIFIED.
- 18. EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
- 19. THE CONTRACTOR SHALL EXERCISE DUE CARE WHEN WORKING AROUND ALL PROPERTY BOUNDS WHICH ARE TO REMAIN. SHOULD ANY DAMAGE TO A BOUND RESULT FROM THE ACTIONS OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE THE BOUND REPLACED AND/OR REALIGNED BY A LICENSED PROFESSIONAL SURVEYOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.
- 20. DISPOSAL OF ALL SURPLUS MATERIAL SHALL BE AS APPROVED BY THE ENGINEER AND
- 21. LATERAL DRAIN PIPES SHALL BE INSTALLED WITH A PITCH OF 0.01 FOOT PER FOOT (MINIMUM) UNLESS NOTED OTHERWISE ON THE PLANS.



S	ANBO	RN	HEA	AD	Project: Ro Location: 0 Project No	Carver, N	IA	Ground E	f Boring B7 Elevation: 80.5 ± feet AVD 1988			
	anborn, He				iu pie eestus	llaw Ota	A					
	_				ill Rig, and Ho		Auger	Groundwater Readings				
San	npling Met	hod: 2" O.I	D. Split S	poon,	Automatic Ha	mmer		Depth Date Time to Water	r Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
	ling Compa eman: G. G	-	Corpora	ation, lı	nc.			12/29/20 11:45 5'	Ground Surface	30'	32'	<10 Minutes
Date	Started:	12/29/20			e Finished: 12							
	ged By: J.		e Informa		cked By: Q. P	Stratu	m					
Dept (ft)	Sample No.	Depth (ft)	Spoon Blows	Rec	Field Testing	Log Desc	ription	Geologic De	escription		Remarks	
			per 6 in	`	Data							
	S-6	25 - 27	2 3 4	24/9	i			S-6 (25 to 27'): Loose, tan, trace Silt. Wet.	fine to medium SAND,			
26	7		3									_
	-											-
28					á							_
						S/	AND					
	1											-
30	- s-7	30 - 32	15	24/15	á			S-7 (30 to 32'): Dense, brow	wn, fine to medium			_
			25 21					SAND, trace Śilt. Wet.				-
			42									
32					ľ		32'	Boring terminated at 32 fee encountered.	et. No refusal			_
1/26/2	-											-
105 34												_
4D V1												
N H	1											-
36 36	-											_
017 S/	-											-
3E 38												_
Ω 38												
A HEA	1											-
120g 40	-											_
17 SAI												-
N 2												
5 42 5 89												_
.03 LC	-											-
44 44 44	_											_
SKTO												
ILOE ILOE	1											=
IIISSE 46	-											_
RS/MR	-											-
:\USE!												
5 48 9 9												_
BORING LOG C:USERSIMRUSSELLIDESKTOP4/250.03 LOGS.GPJ 2017 SANBORN HEAD V1.GLB 2017 SANBORN HEAD V1.GDT 1/26/21 1/26/21	+											-
E											O.L.	eet: 2 of 2
											Sn	eet. Z OT Z

SA	NBOF	RN	HE	AD	Project: Rout Location: Ca Project No.: 4	rver, MA	54 Log of Boring B9  Ground Elevation: 82 ± feet Datum: NAVD 1988	
	born, Hea							
					ill Rig, and Hollo	_	Groundwater Readings	
-	_		-		Automatic Hamn	ner	Depth Date Time to Water Ref. Pt.	Depth Depth Stab. of Casing of Hole Time
	g Compar ıan: G. Gu	-	K Corpora	ation, lı	IC.		12/28/20 11:15 3.75' Ground Surface	30' 32' <30 Minute
	Started: 12 d By: J. M		-		Finished: 12/28 cked By: Q. Prat			
	G By. 3. W		le Inform			Stratum		
Depth (ft)	Sample No.	Depth (ft)	Spoon Blows per 6 in	Rec	Field Testing Log Data	Description	Geologic Description	Remarks
0 —	S-1	0 - 2	WOH 2 1			TOPSOIL0.5'	S-1A (0 to 0.5'): Very loose, dark brown, fine to coarse SAND, little Silt, trace Gravel, few Root particles. Moist. TOPSOIL.	
2 —			2				S-1B (0.5 to 2'): Very loose, brown, fine to coarse SAND, little Silt, very few Root particles. Moist.	
_	.							
4 —								
6 —	S-2	5 - 7	5 6 6	24/15			S-2 (5 to 7'): Medium dense, brown, fine SAND, little Silt. Wet.	
-	-							
8 —						SAND		
10—	S-3	10 - 12		24/17			S-3 (10 to 12'): Medium dense, brown, fine to	
-			6 5 5				coarse SAND, little Silt, little Gravel. Wet.	
12	-							
14—								
-	S-4	15 - 17	7	24/18	1	15'	S-4 (15 to 17'): Medium dense, brown, fine SAND, little Silt. Wet.	
16—			7 10					
18—								
-	-							
20—	S-5	20 - 22	8 8	24/16		SAND & SILT	S-5 (20 to 22'): Medium dense, brown, fine to medium SAND, some Silt. Wet.	
22—			10					
-								
24—	1				140	4		

SA	NBOF	n	HE	AD	Project: R Location: Project No	Car	-	Log of Boring B8  Ground Elevation: 82 ± feet Datum: NAVD 1988
		d & Asso				_0.	. 04	
	_				-		v Stem Auger	Groundwater Readings
-	-		-		Automatic Ha	ımme	er	Depth Depth Depth Stab.  Date Time to Water Ref. Pt. of Casing of Hole Time
	g Compar an: G. Gu	ny: Soil X ıinto	Corpora	ation, Ir	ıc.			12/28/20 09:00 5' Ground Surface 30' 32' <20 Minut
	tarted: 12				e Finished: 12 cked By: Q. I		20	
	d By: J. N		• Informa		скеа ву. ц. г		Stratum	
Depth (ft)	Sample No.	Depth (ft)	Spoon Blows per 6 in	Rec	Field Testing Data	Log	Description	Geologic Description Remarks
0 —	S-1	0 - 2	2 5 4	24/17	Data	וא או ער או	0' TOPSOIL	S-1A (0 to 1'): Loose, dark brown, fine to coarse SAND, trace Silt, trace Gravel, few Root particles. Moist. TOPSOIL.
2 —			6				1'	S-1B (1 to 2'): Loose, orange/black, fine to coarse SAND, little Silt, trace Gravel, very few Root particles. Moist.
4 —	S-2	5 - 7	3	24/11				S-2 (5 to 7'): Medium dense, brown, fine to
6 —			6 5 7				SAND	medium SÁND, little Silt, tráce Gravel. Wet.
8 —								
10—	S-3	10 - 12	3 4 4 6	24/12			10'	S-3 (10 to 12'): Loose, brown, fine SAND and SILT. Wet.
14—								
16—	S-4	15 - 17	4 6 8 10	24/15				S-4 (15 to 17'): Medium dense, brown, fine SAND and SILT. Wet.
18—							SAND & SILT	
20-	S-5	20 - 22	7 10 12 12	24/12				S-5 (20 to 22'): Medium dense, brown, fine SAND and Silt. Wet.
22—			12					
24—								

		RN 🏢	-		Location: Project N			Ground Elevation: 82 ± feet Datum: NAVD 1988			
		ad & Asso			ill Rig and H	lallav	Stem Auger				
								Groundwater Readings			
Sampl	ing Meth	od: 2" O.C	). Split S	spoon,	Automatic H	ammo	er	Depth Date Time to Water Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
	_	ny: Soil X	Corpora	ation, Ir	nc.			12/28/20 11:15 3.75' Ground Surface	30'	32'	<30 Minutes
	an: G. Gu tarted: 12			Date	e Finished: 1	2/28/2	20				
ogge	d By: J. N				cked By: Q.						
epth (ft)	Sample		Informa Spoon	Pen/	Field		Stratum	Geologic Description		Remarks	
(ft)	No.	(ft)	Blows per 6 in	Rec	Testing Data	Log	Description	Goologio Booonpaon		rtomanto	
_	S-6	25 - 27	9	24/18			25'	S-6 (25 to 27'): Medium dense, brown, fine to			-
			10 10					S-6 (25 to 27'): Medium dense, brown, fine to medium SAND, trace Silt. Wet.			
26—			10								
_											4
28—							SAND				$\dashv$
_							SAIND				_
30—	S-7	30 - 32	12 16	24/24				S-7 (30 to 32'): Dense, brown, fine to medium SAND, trace Silt. Wet.			$\exists$
_			20 27					G. W.D., II acco Citt. 1761.			_
			21								
32—						247	32'	Boring terminated at 32 feet. No refusal			$\neg$
_								encountered.			_
34—											$\neg$
_											_
36—											$\exists$
_											_
38—											
_											_
40—											_
-											-
42—											$\dashv$
_											_
,											
44—											$\dashv$
_											4
40											
46—											$\dashv$
-											_
4.5											
48—											$\dashv$
_											

#### **CARVER MONTELLO STREET** Project: Route 58/Montello 54 Log of Boring B8 SANBORN HEAD Location: Carver, MA Ground Elevation: 82 ± feet Datum: NAVD 1988 **BORING LOGS** Sanborn, Head & Associates, Inc. Drilling Method: ATV Mounted Acker Drill Rig, and Hollow Stem Auger SHEET 6 OF 61 Sampling Method: 2" O.D. Split Spoon, Automatic Hammer

ogge	d By: J. N				cked By: Q.	Pratt						
epth (ft)	Sample	Depth	Spoon Blows	Pen/	Field Testing	Log	Stratum Description	Geologic Descri	iption		Remarks	
	No.	(ft)	per 6 in	(in)	Data							
26—	S-6	25 - 27	5 8 9 10	24/24			SAND & SILT	S-6A (25 to 26.5'): Medium den SAND, some Silt. Wet.	nse, brown, fine			
			10				26.5'	S-6B (26.5 to 27'): Medium den medium SAND, trace Silt. Wet.	nse, orange, fine to	-		
20									•			
28—												
1							SAND					
30—	S-7	30 - 32	7 10	24/24				S-7 (30 to 32'): Medium dense, medium SAND, trace Silt. Wet.	brown, fine to			
-			11 11 10					medium SAND, trace Sitt. Wet.	•			
32—							32'	Boring terminated at 32 feet. No	o refusal	_		
								encountered.	o reiusai			
_												
34—												
-												
36—												
-												
38—												
40												
40—												
-												
42—												
-												
44—												
_												
16-												
46—												
-												
48—												

	NBOF	*4*	4		Project: R Location: Project No	Car		Log of Boring B4  Ground Elevation: 81.5 ± feet Datum: NAVD 1988			
Drilling	g Method:	ATV Mo	unted Ac	ker D	ill Rig, and H	ollov	v Stem Auger				
Sampl	ing Meth	nd: 2" O F	Snlit S	noon	Automatic Ha	amm	or	Groundwater Readings			
Campi	ing mean	Ju. 2 U.L	. opiit o	poori,	Automatic	4111111	<b>.</b>	Depth Date Time to Water Ref. Pt.	Depth of Casing	Depth of Hole	Stab. Time
1	g Compar	-	Corpora	tion, I	nc.			12/30/20 08:30 5' Ground Surface	5'	7'	-
1	an: G. Gu Started: 12			Dot	e Finished: 1	2/20/	20				
	d By: J. N				ecked By: Q. I						
			Informa		•		Stratum				
Depth (ft)	Sample	Depth	Spoon	Pen/	Field		Description	Geologic Description		Remarks	
(11)	No.	(ft)	Blows per 6 in		Testing Data	Log	Description				
0 —				24/4			0'				_
	S-1	0 - 2	2 2	24/4		مر	TOPSOIL	S-1A (0 to 1'): Very loose, dark brown, fine to coarse SAND, little Silt, trace Gravel, common			
-			2 3			2	1'	Root particles, very few Leaf particles. Moist. TOPSOIL.	,		_
			3					S-1B (1 to 2'): Very loose, brown, fine to coarse	1		
2 —								SAND, little Gravel, trace Silt, very few Root			_
							1	particles. Moist.			
-							SAND				-
							57.11.5				
4 —							<u> </u>				_
-	S-2	5 - 7	12	24/12				S-2A (5 to 5.5'): Medium dense, brown/gray, fine to			-
			9 8			m	5.5'	coarse SAND, some Gravel, trace Silt. Wet.	<b>d</b>		
6 —			8				1	S-2B (5.5 to 7'): Medium dense, brown, fine SAND and SILT. Wet.			_
								and Sier. Wet.			
-											_
8 —											
"											
_											
							1				
10—		40 40						0.0 (40.4 40)) 14 15 15 15 15 15 15 15 15 15 15 15 15 15			_
	S-3	10 - 12	8	24/12		Ш		S-3 (10 to 12'): Medium dense, brown, fine SAND and SILT. Wet.			
_			7 9								_
			"				SAND & SILT				
12-							<u> </u>				_
							.				
-											-
14—											
-	S-4	15 - 17		24/18				S-4 (15 to 17'): Medium dense, brown/gray, fine			_
40			8 8					SAND and SILT. Wet.			
16—	1		7				1				
_	]						17'				
								Boring terminated at 17 feet. No refusal encountered.			
18—								S. ISSUITION OF			_
-											_
20—											_
-											-

Sheet: 1 of 1

	NBOF	W.			1 -	oute 58/Montello Carver, MA o.: 4250.03	Ground Elevation: 79.5 ± feet Datum: NAVD 1988	
Drillin	-	: ATV Mo	unted A	ker Dr	•	ollow Stem Auger	Groundwater Readings	
Samp	ling Metho	od: 2" O.I	D. Split S	poon,	Automatic Ha	ımmer	Depth Date Time to Water Ref. Pt.	Depth Depth Stab. of Casing of Hole Time
	g Compar	-	Corpora	tion, Ir	ıc.		12/29/20 08:45 5' Ground Surface	20' 22' <20 Minute
	nan: G. Gu Started: 12			Date	e Finished: 12	2/29/20		
Logge	ed By: J. N				cked By: Q. F			T
Depth	Sample	Sample	e Informa Spoon	Pen/	Field	Stratum	Geologic Description	Remarks
(ft)	No.	(ft)	Blows per 6 in	Rec (in)	Testing Data	Log Description		1.0
0 —	S-1	0 - 2	2 5 5 25	24/12		0' TOPSOIL 0.5'	S-1A (0 to 0.5'): Loose, dark brown, fine to coarse SAND, little Silt, little Gravel, common Root particles, very few Grass particles. Moist. TOPSOIL.	_
2 —	-		20				S-1B (0.5 to 2'): Loose, brown, fine to coarse SAND, little Gravel, trace Silt, very few Root particles. Moist. FILL.	
4 —						FILL		
6 —	S-2	5 - 7	2 2 4	24/13		6'	S-2A (5 to 6'): Loose, brown, fine to coarse SAND, little Gravel, trace Silt, very few Root particles. Wet. FILL.	
-	-		6				S-2B (6 to 7'): Loose, gray, fine to medium SAND, some Silt, trace Gravel, few decomposed Plant particles. Wet.	
8 —	-					ORGANIC SILTY SAND		
10—	S-3	10 - 12	4 6	24/13		  10'   10'	S-3 (10 to 12'): Loose, brown, fine to medium SAND and SILT, trace Gravel. Wet.	
-	-		4 6					
12—	_							
-								
14—	1							
-	S-4	15 - 17	4 4	24/16		SAND & SILT	S-4 (15 to 17'): Loose, brown, fine SAND and SILT. Wet.	
16—	-		5					
-	-							
18—								
-								
20-	S-5	20 - 22	3 2	24/12			S-5A (20 to 21'): Loose, brown, fine SAND and SILT. Wet.	
-	-		3 4			21'	S-5B (21 to 22'): Loose, brown, fine to medium	-
22—	-					SAND & SILT22'	SAND, trace Silt. Wet.  Boring terminated at 22 feet. No refusal encountered.	_
24—								
24-	1							

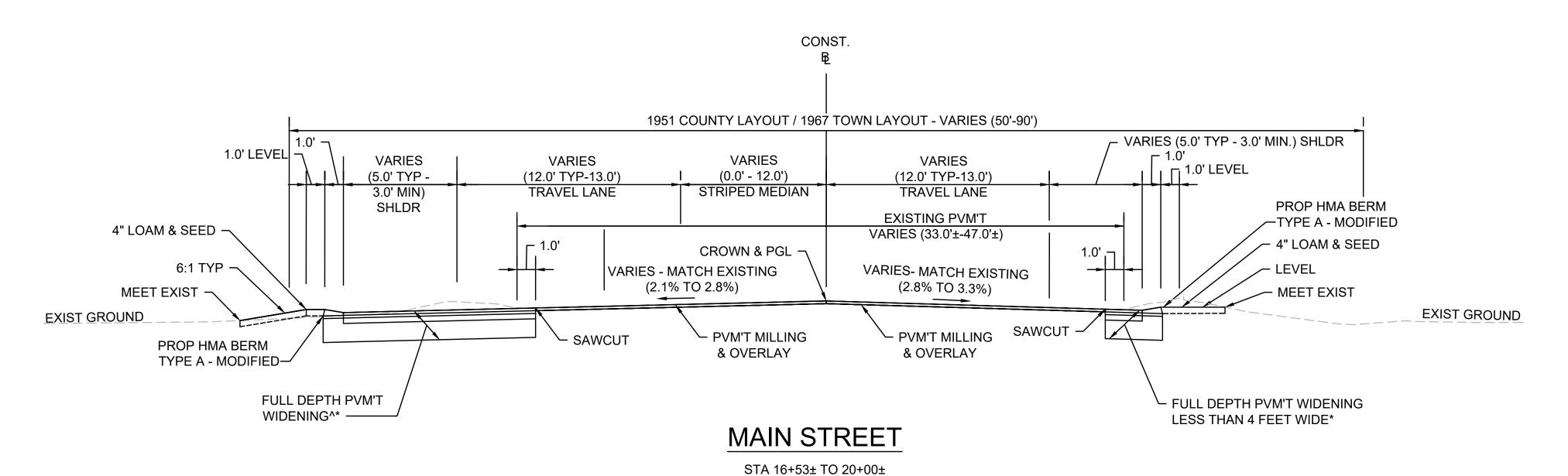
SA	NBOF	en	HEA	AD	Project: Rout Location: Ca Project No.: 4	ver, MA	Log of Boring B5  Ground Elevation: 81 ± feet Datum: NAVD 1988	
Sank	orn, Hea	d & Ass	ociates,	Inc.				
Orilling	Method	ATV Mo	ounted A	cker Dr	ill Rig, and Hollo	w Stem Auger		
Orilling	g Compar	ny: Soil X	-		Automatic Hamm nc.	er	Groundwater Readings Depth  Date Time to Water 12/29/20 13:45 4.5' Ground Surface	Depth of Casing of Hole 720' 22' <5 Minu
Date S	an: G. Gu tarted: 12 d By: J. M	2/29/20 IcCarthy		Che	e Finished: 12/29 cked By: Q. Pratt			
epth (ft)	Sample No.	Sampl Depth (ft)	Spoon Blows per 6 in	Pen/ Rec	Field Testing Log Data	Stratum Description	Geologic Description	Remarks
0 —	S-1	0 - 2	2 2 3 2	24/16	<i></i>	TOPSOIL	S-1A (0 to 1'): Loose, dark brown, fine SAND, little Silt, trace Gravel, common Root particles, very few Leaf particles, very few Wood particles. Moist. TOPSOIL.	
2 —							S-1B (1 to 2'): Loose, brown, fine to medium SAND, little Gravel, trace Silt, very few Root particles. Moist.	
4 —						SAND		
6 —	S-2	5 - 7	5 5 5	24/13		5'	S-2 (5 to 7'): Loose, brown, fine SAND and SILT. Wet.	
-			5					
8 —								
10—	S-3	10 - 12	5	24/12			S-3 (10 to 12'): Medium dense, brown/gray, fine SAND and SILT. Wet.	
12—			6 7					
-						SAND & SILT		
14	S-4	15 - 17	2	24/18			S.4 (15 to 17'): Loose brown/gray fine SAND and	
16—	,	.5 11	4 3 4	_ ,, 10			S-4 (15 to 17'): Loose, brown/gray, fine SAND and SILT. Wet. Seam of fine to medium Sand at 16 feet	
18—								
-								
20—	S-5	20 - 22	5 6 6 7	24/22			S-5 (20 to 22'): Medium dense, brown/gray, fine SAND and SILT. Wet.	
22—					#11	22'	Boring terminated at 22 feet. No refusal encountered.	

					CARVER
Project: Route 58/Mont	Log of Boring B3				MONTELLO STREET
Project No.: 4250.03	Ground Elevation: 80 ± feet Datum: NAVD 1988				<b>BORING LOGS</b>
_∣ Drill Rig, and Hollow Stem Au	ger				SHEET 5 OF 61
, Automatic Hammer	Groundwater Readings	Denth	Denth	Stah	

Sanb	orn, Hea	ad & Ass	ociates,	Inc.					
Orilling	Method	: ATV Mo	unted A	cker Dr	ill Rig, and H	lollow	Stem Auger		
Sampli	ing Meth	od: 2" O.I	D. Split S	Spoon, A	Automatic H	ammo	er	Groundwater Readings Depth Depth Depth	Stab.
•		ny: Soil X	Corpora	ation, Ir	ıc.			DateTimeto WaterRef. Pt.of Casingof Hole12/30/2010:303'Ground Surface20'22'<	<b>Time</b> 10 Minute
	an: G. Gı tarted: 1			Date	Finished: 1	2/30/	20		
		/IcCarthy			cked By: Q.				
epth	0		Informa Spoon	ation Pen/	Field		Stratum	Geologic Description Remarks	
(ft)	Sample No.	Depth (ft)	Spoon Blows per 6 in	Rec (in)	Testing Data	Log	Description	Ceologic Description Remarks	
0 —	S-1	0-2	2 1 3	24/13			0' TOPSOIL	S-1A (0 to 1'): Very loose, dark brown, fine to coarse SAND, little Silt, trace Gravel, common Root particles, few Leaf particles. TOPSOIL.	
2 —			5					S-1B (1 to 2'): Very loose, brown, fine to coarse SAND, little Gravel, trace Silt. Moist.	
-							SAND		
4 –							5'		
6 —	S-2	5-7	7 8 9 11	24/16				S-2 (5 to 7'): Medium dense, brown, fine to coarse SAND and SILT. Wet.	
8 —									
10—	S-3	10 - 12	8	24/15				S-3 (10 to 12'): Medium dense, brown/gray, fine SAND, some Silt. Wet.	
12—			5 6						
-							SAND & SILT		
14—									
16—	S-4	15 - 17	2 4 4 6	24/5				S-4 (15 to 17'): Loose, gray, fine SAND, some Silt. Wet.	
-									
18—									
20—	S-5	20 - 22	2 4	24/17				S-5 (20 to 22'): Loose, brown, fine to coarse SAND, trace Silt. Wet.	
_			4 6					OAND, HAGG GIRL PYGL	
22—						47.1245	22'  -	Boring terminated at 22 feet. No refusal encountered.	
24—									
								Sheet:	

SANBORN HEAD

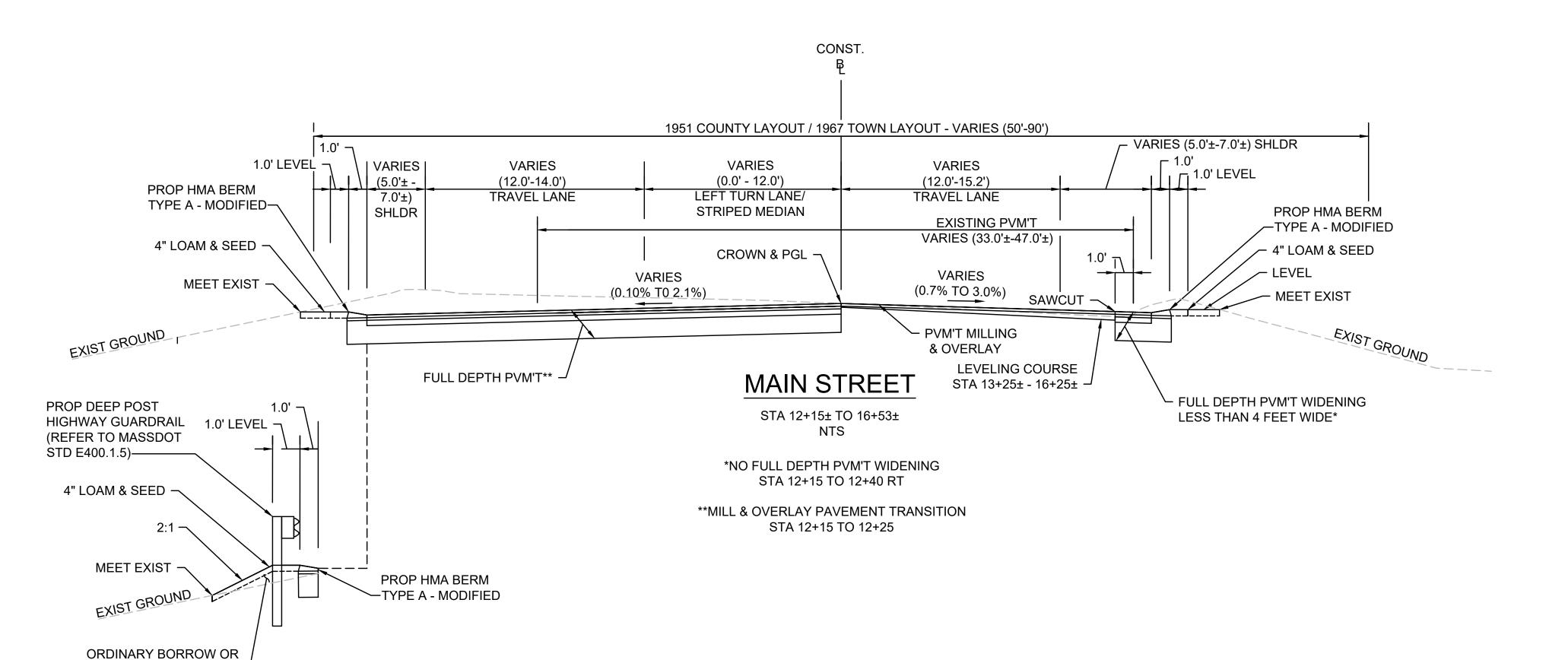
			F		Project: R	oute	58/Montello	Log of Boring B7	
SA	NBOI	RN	HE	AD	Location: Project No		•	Ground Elevation: 80.5 ± feet Datum: NAVD 1988	
	born, Hea				l ill Rig, and Ho	allau	· Stom Augor		
	-				<b>.</b>			Groundwater Readings	
'	-		•	•	Automatic Ha	ımm	er	Depth Date Time to Water Ref. Pt. o	Depth Depth Stab. f Casing of Hole Time
1	g Compa nan: G. Gı	-	Corpora	ation, l	nc.			12/29/20 11:45 5' Ground Surface	30' 32' <10 Minutes
1	Started: 12				e Finished: 12				
	ed By: J. N		e Inform		cked By: Q. P	_	Stratum		
Depth (ft)	Sample No.	Depth (ft)	Spoon Blows per 6 in	Rec	Field Testing Data	Log	Description	Geologic Description	Remarks
0 —	S-1	0 - 2	WOH	24/12		Ø	0'	S-1A (0 to 1'): Loose, dark brown, fine to coarse	_
-			1 1 3			<i>J</i>	TOPSOIL1'	SAND, little Silt, little Gravel, common Root particles, few Leaf particles, very few Wood particles. Moist. TOPSOIL.	-
2 —								S-1B (1 to 2'): Very loose, brown, fine to medium SAND, little Silt, trace Gravel, very few Root particles. Moist.	_
-	-								-
4 —									
4 -									
-	S-2	5 - 7	4 10	24/16				S-2 (5 to 7'): Medium dense, brown, fine to medium SAND, some Silt, trace Gravel. Wet.	-
6 —	-		10 10 11				SAND	medium SAND, some Silt, flace Graver. Wet.	_
			''						
5									
8 —	-								_
- -	-								-
) 									_
8 10 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	S-3	10 - 12	2 2	24/16				S-3A (10 to 11'): Loose, brown, fine to medium SAND, trace Silt. Wet.	
ANBO	-		7 8					S-3B (11 to 12'): Loose, brown, fine SAND and SILT. Wet.	-
12—								OLIT. WGC	_
- STB									-
14— 2									_
- X	S-4	15 - 17	6	24/16				S-4 (15 to 17'): Medium dense, brown, fine SAND	-
ਨੇ   -   16—	-		10 10 10				011 7 0 0 0 0 10	and SILT. Wet.	_
전 전			10				SILT & SAND		
268.6									
18—	1								-
- 1425	-								-
20—			_						_
	S-5	20 - 22	7 6 6	24/16				S-5A (20 to 21.5'): Medium dense, brown, fine SAND and SILT. Wet.	
- KUSSI			9				21.5'	C.ED (24.5 to 221). Madium dance brown fine to	-
14 — 14 — 16 — 18 — 20 — 20 — 20 — 20 — 20 — 20 — 20 — 2	-							S-5B (21.5 to 22'): Medium dense, brown, fine to medium SAND, trace Silt. Wet.	_
-	-						SAND		-
24—									_



# NTS

^FULL DEPTH PVM'T WIDENING LESS THAN 4 FEET WIDE STA 18+40 TO 19+00 LT

> *NO FULL DEPTH PVM'T WIDENING STA 19+00 TO 20+00



SUITABLE BACKFILL——

MAIN STREET

STA 12+15± TO 13+75± NTS

# **PAVEMENT NOTES**

#### PROPOSED FULL DEPTH PAVEMENT

SURFACE: 1 3/4" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5)

INTERMEDIATE: 1 3/4" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5)

3½" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0)

SUBBASE: DENSE GRADED CRUSHED STONE FOR SUBBASE OVER

RECLAIMED PAVEMENT BORROW OR GRAVEL BORROW (TYPE B)

RECLAIM EXISTING PAVEMENT TO A DEPTH OF 16" ON MAIN ST AND 6" ON MONTELLO ST AND REMOVE EXCESS RECLAIMED MATERIAL. GRADE AND COMPACT TO PROPER LINES PRIOR TO PLACING CRUSHED STONE AND HMA

COURSES.

#### PROPOSED PAVEMENT MICROMILLING AND PAVEMENT OVERLAY

SURFACE: 1 3/4" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) LEVELING: SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5)

#### PROPOSED FULL DEPTH PAVEMENT (LESS THAN 4 FEET WIDE)

SURFACE: 1 3/4" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) INTERMEDIATE: 1 3/4" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5) BASE: 6" HIGH EARLY STRENGTH CEMENT CONCRETE BASE

SUBBASE: 8" GRAVEL BORROW (TYPE B)

## PROPOSED HOT MIX ASPHALT DRIVEWAY

1½" HOT MIX ASPHALT DRIVEWAY MIX OR SURFACE:

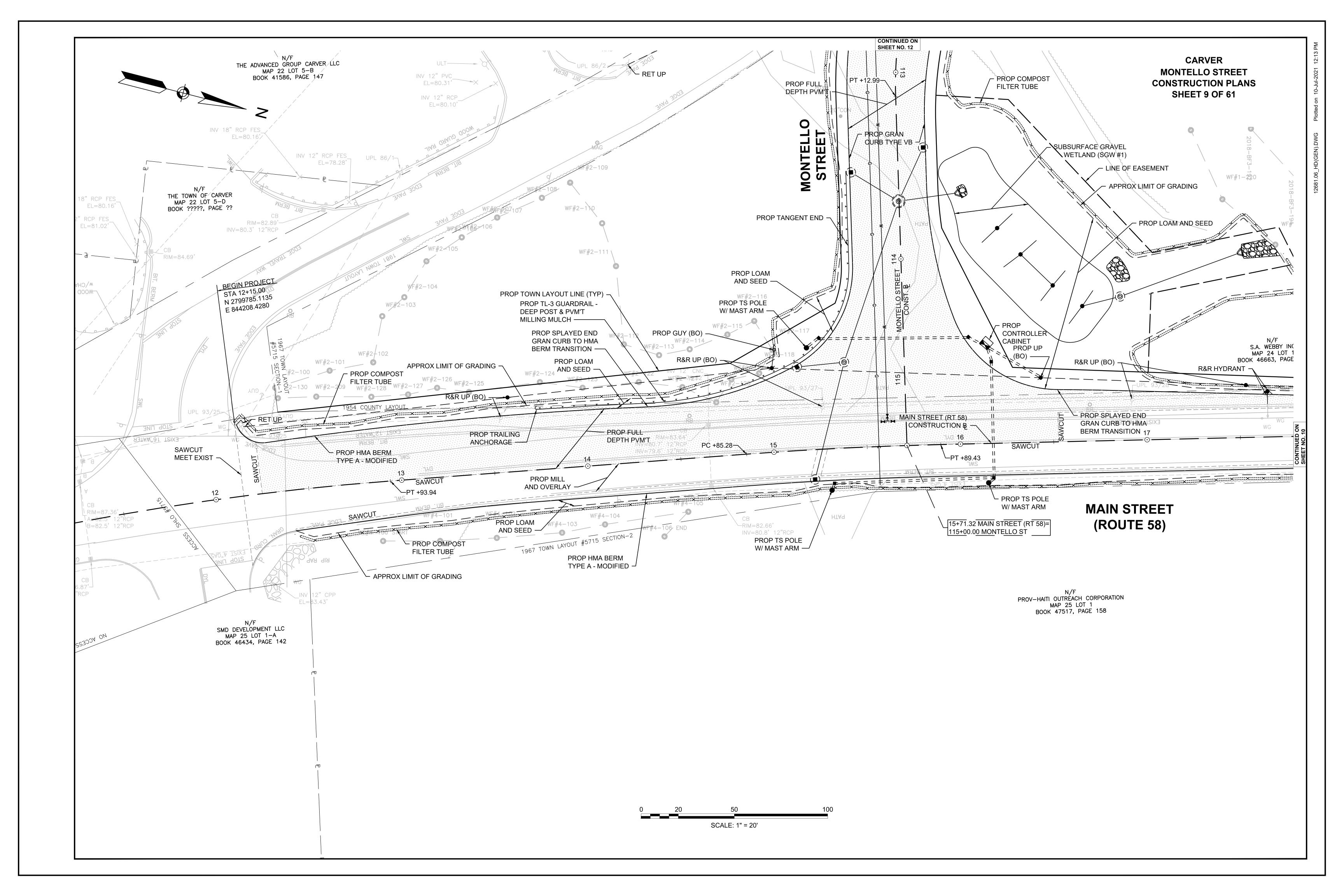
1½" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5)

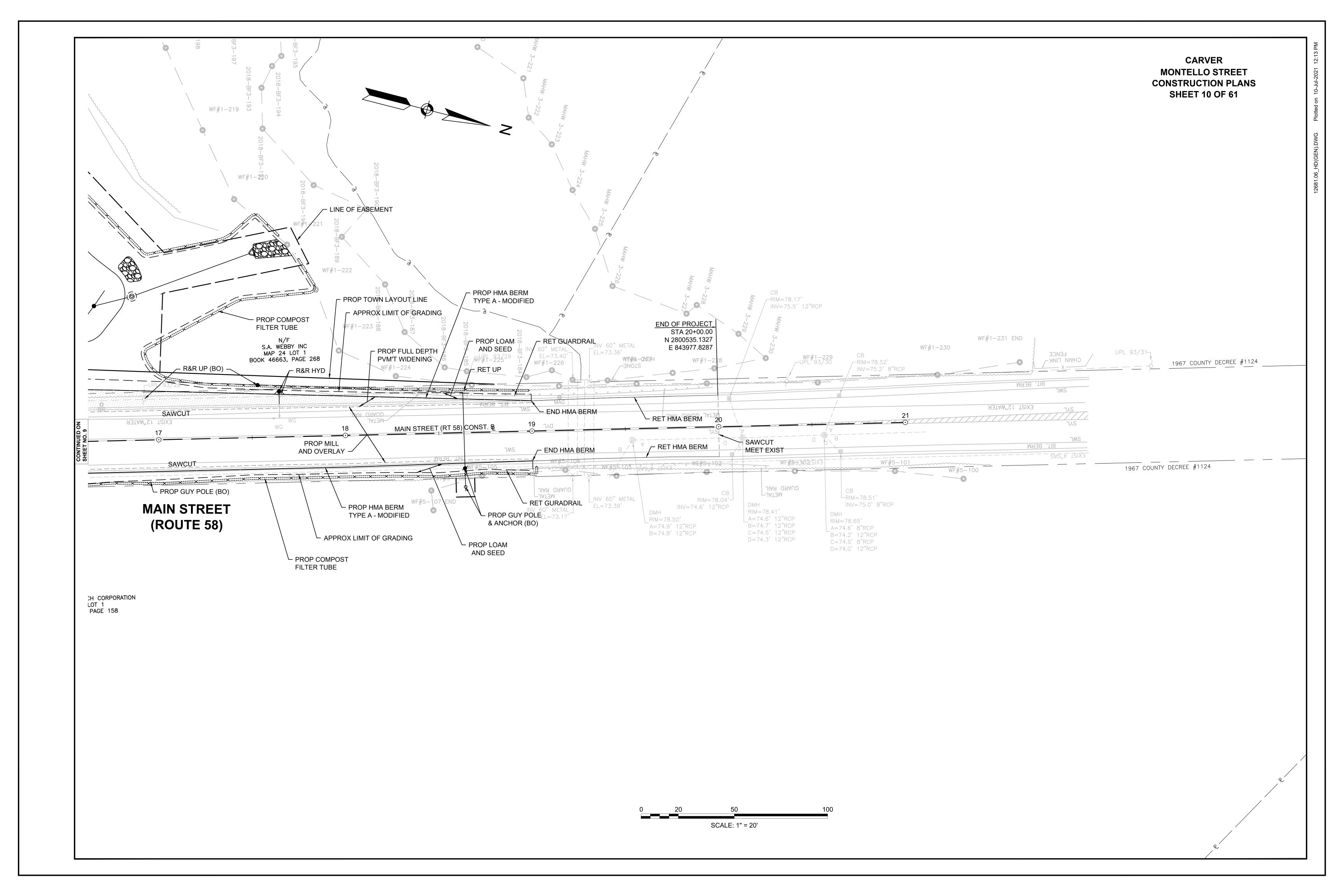
2 1/2" HOT MIX ASPHALT DRIVEWAY MIX OR **INTERMEDIATE:** 2½" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5)

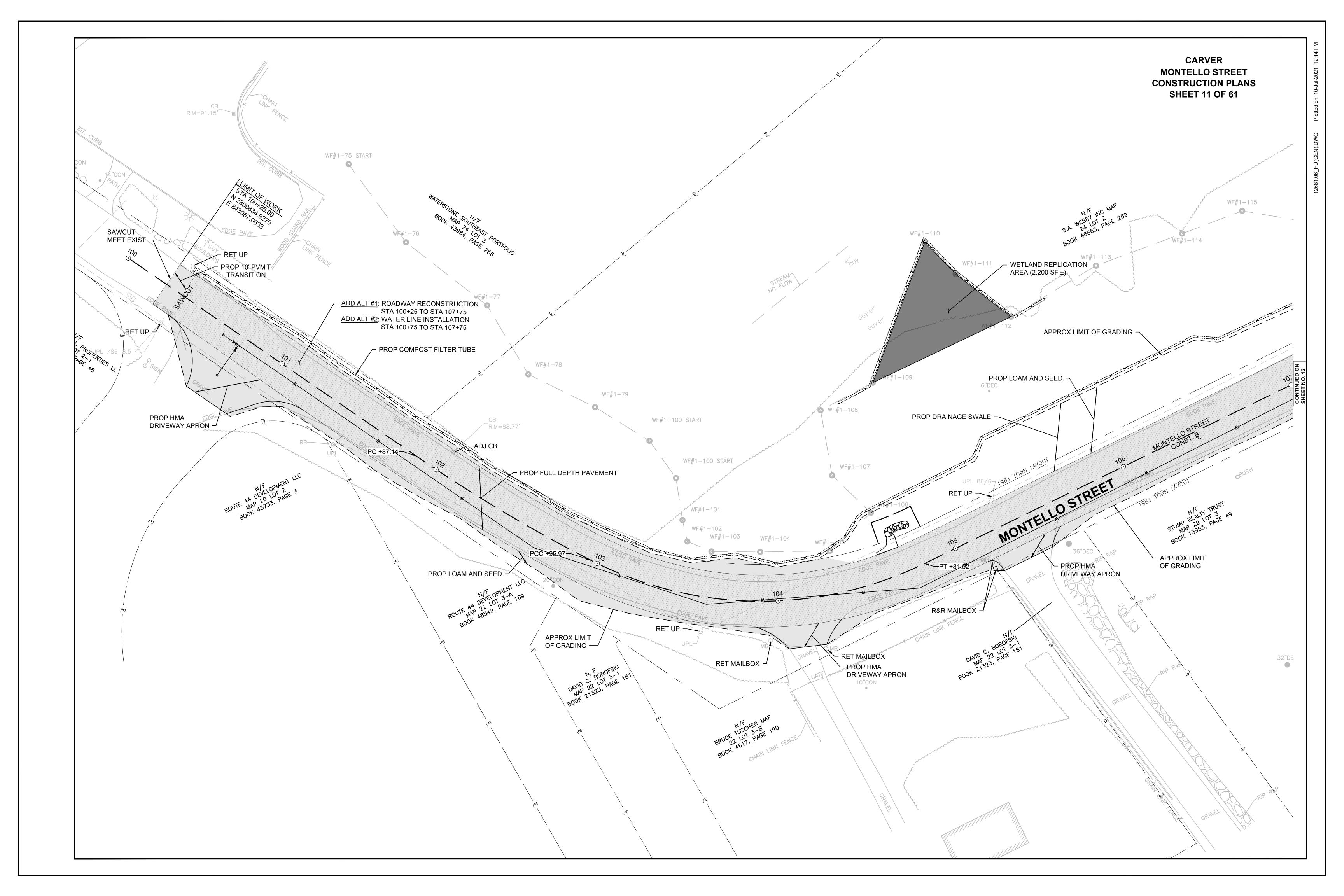
8" GRAVEL BORROW (TYPE B) SUBBASE:

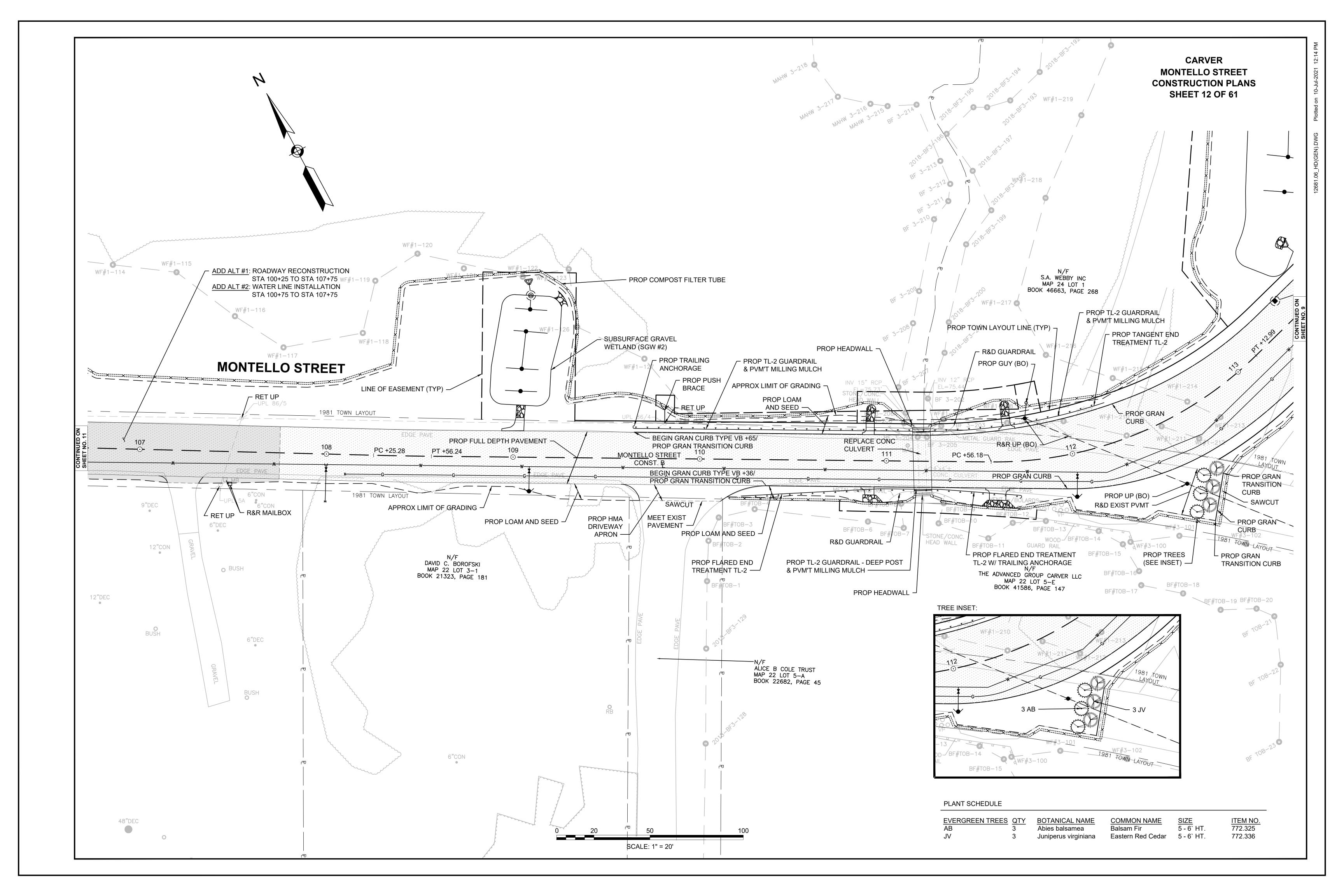
1. ALL HOT MIX ASPHALT PAVEMENTS SHALL BE PRODUCED IN ACCORDANCE WITH SECTION 450 HOT MIX ASPHALT AND SECTION M3 ASPHALTIC MATERIALS OF THE STANDARD SPECIFICATIONS.

- 2. ASPHALT EMULSION FOR TACK COAT (ITEM 452.) SHALL BE SPRAY APPLIED FOR DOUBLE OVERLAP COVERAGE AT 0.08 GAL/SY OVER MILLED SURFACES AND 0.07 GAL/SY OVER SMOOTH SURFACES.
- 3. HMA JOINT SEALANT (ITEM 453.) SHALL BE APPLIED IN SURFACE COURSE AT ALL VERTICAL COLD JOINTS PRIOR TO HMA PAVING.



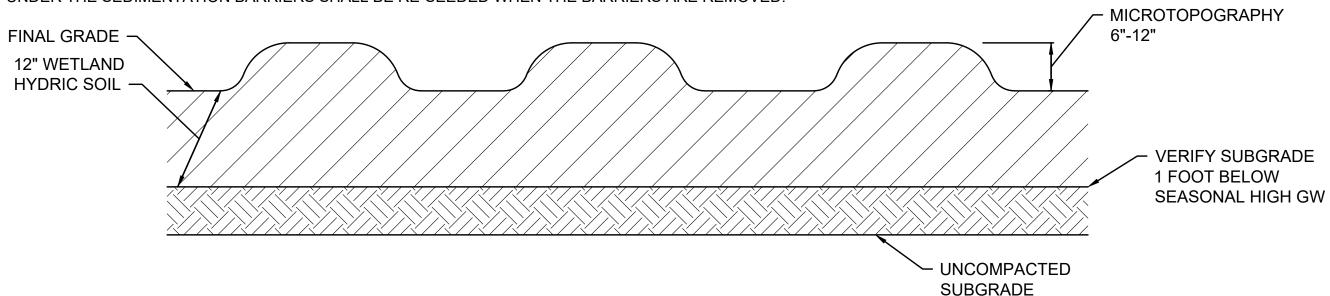






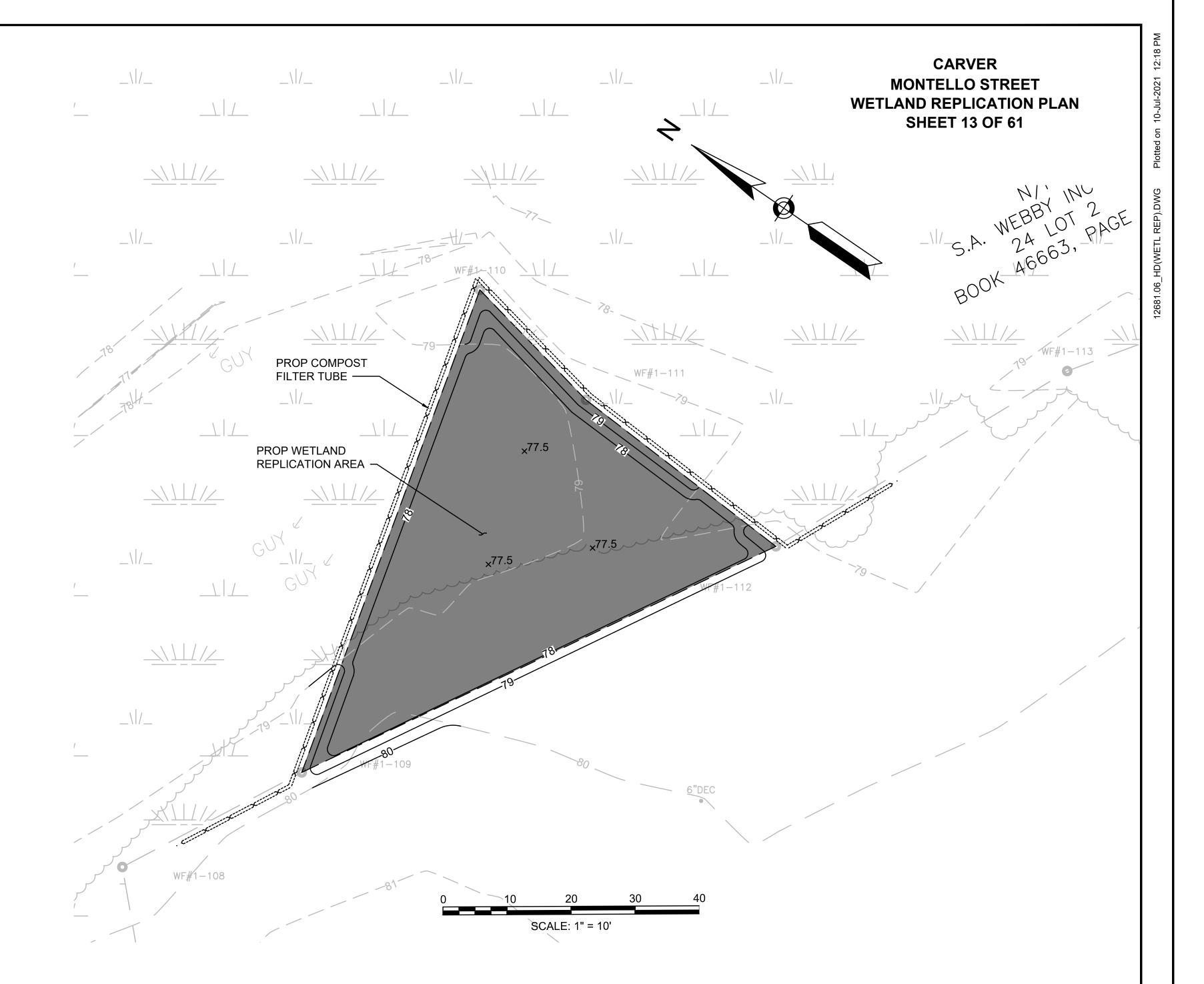
#### WETLAND REPLICATION AREA NOTES:

- 1. A SINGLE ROW OF STAKED COMPOST FILTER TUBES WILL BE INSTALLED ALONG THE BORDER OF THE WETLAND REPLACEMENT AREA. FILTER TUBES SHALL BE TIGHTLY BUTTED TO THE ADJACENT TUBES. TWO 1- INCH BY 1- INCH BY 3 - FOOT STAKES SHALL BE SPACED EVENLY AGAINST THE TUBE AND DRIVEN SOLIDLY INTO THE UNDERLYING MATERIAL TO HOLD THE TUBES IN POSITION. THIS SHALL SERVE AS THE LIMIT OF WORK LINE.
- 2. THE REPLACEMENT AREA SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 12 INCHES BELOW THE FINISHED GRADE SHOWN ON THE PLAN. A BARRIER OF COMPOST FILTER TUBES AS SHOWN ON THE DRAWINGS SHALL SEPARATE ANY WETLAND RESOURCE AREA ADJACENT TO THE REPLACEMENT AREA FROM THE REPLACEMENT AREA. THE SUB-GRADE SHALL BE INSPECTED BY A WETLAND SCIENTIST TO VERIFY THAT THE ELEVATION IS ACCEPTABLE IN RELATION TO THE SEASONAL HIGH WATER MARK.
- 3. ALL SOIL WITHIN THE TOP 12 INCHES OF THE PROPOSED REPLACEMENT AREA SURFACE SHALL BE INSPECTED FOR RUBBLE, COBBLES, ROCK OR OTHER UNSUITABLE MATERIAL; IF UNSUITABLE MATERIAL IS FOUND, IT SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY. IF THE SOIL IS BEYOND USABLE QUALITY AS DETERMINED BY THE WETLAND SCIENTIST, IT SHALL BE DISPOSED OF PROPERLY.
- 4. ALL TREES, STUMPS, BRUSH, AND OTHER VEGETATION SHALL BE REMOVED FROM THE REPLACEMENT AREA THAT WILL BE AFFECTED BY THE PROJECT. THESE ARE NOT TO BE STOCKPILED IN THE RESOURCE AREAS OR BUFFER ZONE WHILE AWAITING DISPOSAL.
- 5. ALL SCRAPED SOILS AND OTHER MATERIALS MUST BE STOCKPILED OUTSIDE THE REPLACEMENT AREA. THE WETLAND SCIENTIST WILL OBSERVE GRADING AND ADJUST THE INITIAL GRADING AS NEEDED TO ENSURE THE FINAL GRADE WILL BE AT OR JUST ABOVE THE HIGH GROUNDWATER ELEVATION. FIELD ADJUSTMENTS MAY INCLUDE MORE OR LESS EXCAVATION TO TARGET THE FINAL GRADE ELEVATION, WITH ONE- FOOT OF TOPSOIL, AT HIGH GROUNDWATER.
- 6. THE REPLACEMENT AREA SHALL BE BACKFILLED WITH THE HYDRIC (WETLAND) SOILS TO A MINIMUM DEPTH OF 12 INCHES. THE ADDED SOILS USED SHALL BE GRADED TO BE AT A GRADE COMPATIBLE WITH THE ADJACENT WETLAND. ANY EXCAVATED HYDRIC SOILS FROM THE WETLAND IMPACT AREAS TO BE USED IN THE WETLAND REPLACEMENT AREA SHALL BE EXAMINED BY THE WETLAND SCIENTIST TO VERIFY THAT THEY DO NOT CONTAIN SEED OR RHIZOMES OF INVASIVE PLANT SPECIES. IF UNDESIRABLE PLANT MATERIAL IS PRESENT OR IF THE WETLAND SCIENTIST DETERMINES THAT THE SOILS CONTAIN THE SEEDS OF INVASIVE SPECIES, THE SOILS WILL BE REMOVED FROM THE SITE AND NOT USED IN THE WETLAND REPLACEMENT AREA. IF THERE IS NOT SUFFICIENT USABLE HYDRIC SOIL FROM THE PROPOSED WETLAND FILL AREAS TO PROVIDE 12 INCHES OF BACK FILL IN THE WETLAND REPLACEMENT AREA, AN ALTERNATIVE SOIL MIXTURE MAY BE USED. SOILS SHALL HAVE AT LEAST A 12 PERCENT CARBON CONTENT BY WEIGHT AND BE SPREAD EVENLY. PEAT MOSS OF ANY TYPE SHALL NOT BE USED AS THE SOURCE OF ORGANIC MATTER.
- 7. THE WETLAND SOILS SHALL BE DEPOSITED IN THE REPLACEMENT AREA IN A MANNER MINIMIZING TRAVEL AND SUBSEQUENT COMPACTION OF THE UNDERLYING MATERIAL AND REPLACEMENT WETLAND SOILS.
- 8. PRIOR TO PLANTING, COARSE WOOD DEBRIS OF DEAD AND DECAYING LOGS, BRANCHES STUMPS SHALL BE SPREAD AROUND THE REPLACEMENT WETLAND AND SHALL COVER AT LEAST 4 PERCENT OF THE GROUND SURFACE.
- 9. ALL PLANTING WILL BE PERFORMED IN THE SPRING (4-15 TO 6-15) OR FALL (9-1 T 10-15).
- 10.ALL PLANT MATERIAL SHALL BE HEALTHY, FREE OF DISEASE AND PESTS AND CONTAIN A WELL-DEVELOPED ROOT SYSTEM.
- 11.TREES AND SHRUBS TO BE RANDOMLY PLACED WITHIN THEIR RESPECTIVE PLANTING AREA, WITH WETLAND REPLACEMENT AT 8 FEET ON CENTER OR LESS.
- 12.ONCE ALL TREES AND SHRUBS HAVE BEEN PLANTED, THE WET LAND TREE AND SHRUB AREA WILL BE SEEDED WITH A HERBACEOUS NATIVE NEW ENGLAND WETLAND SEED MIX THE REPLACEMENT AREA SHALL BE SEEDED AT THE RATE OF 1 LB OF SEED MIXTURE PER 5,000 SQUARE FEET. HYDROSEEDING MAY BE USED.
- 13. AN HERBACEOUS EROSION CONTROL / RESTORATION SEED MIXTURE SHALL BE INCORPORATED IN TO THE APPLICATION AT AN APPLICATION RATE OF 35 LBS OF SEED MIXTURE PER ACRE. EROSION AND SEDIMENTATION CONTROLS WILL REMAIN IN PLACE UNTIL ALL AREAS ARE STABILIZED.
- 14.UPON COMPLETION OF THE REPLACEMENT AREA, A STAKED COMPOST FILTER TUBE BARRIER SHALL BE PLACED AROUND THE ENTIRE PERIMETER TO PROTECT IT DURING THE REST OF THE CONSTRUCTION.
- 15. THE FINAL GRADING OF THE WETLAND SOILS SHALL RESULT IN NO BREAKS IN ELEVATION UPON REMOVAL OF SEDIMENTATION BARRIERS.
- 16. THE SEDIMENTATION BARRIERS SHALL BE REMOVED AT THE COMPLETION OF ALL CONSTRUCTION FOR THE PROJECT. THE GROUND UNDER THE SEDIMENTATION BARRIERS SHALL BE RE-SEEDED WHEN THE BARRIERS ARE REMOVED.



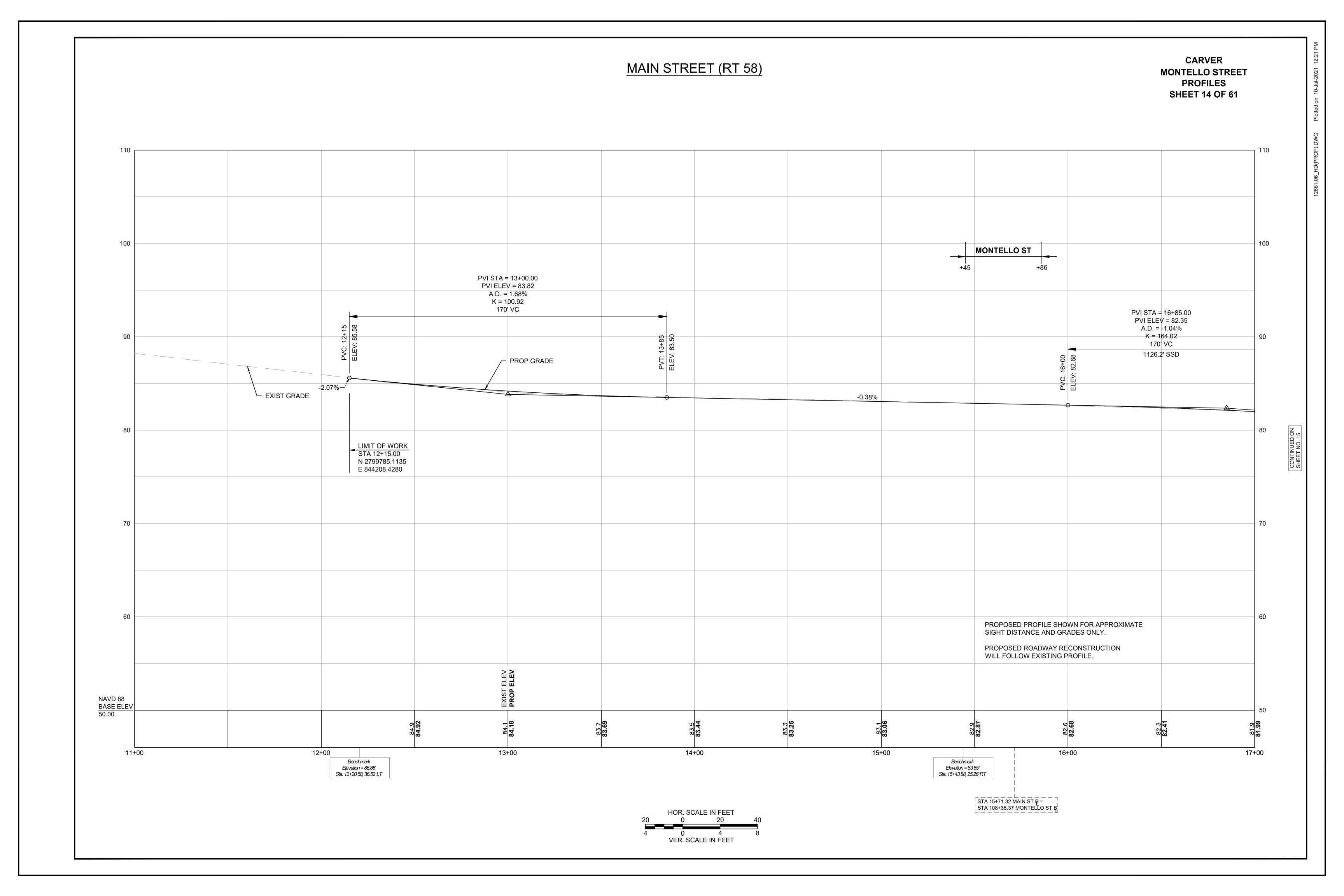
# WETLAND REPLICATION AREA

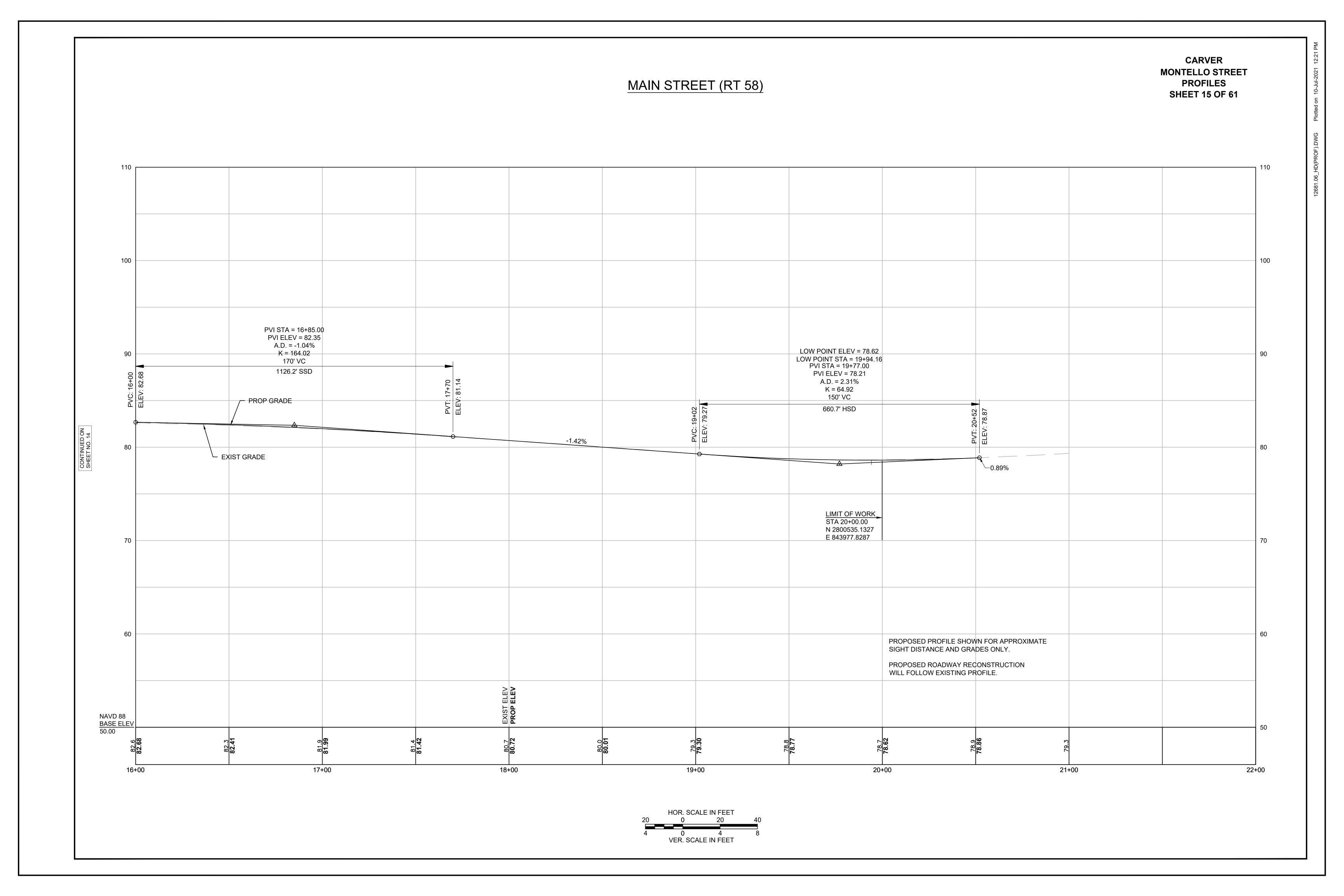
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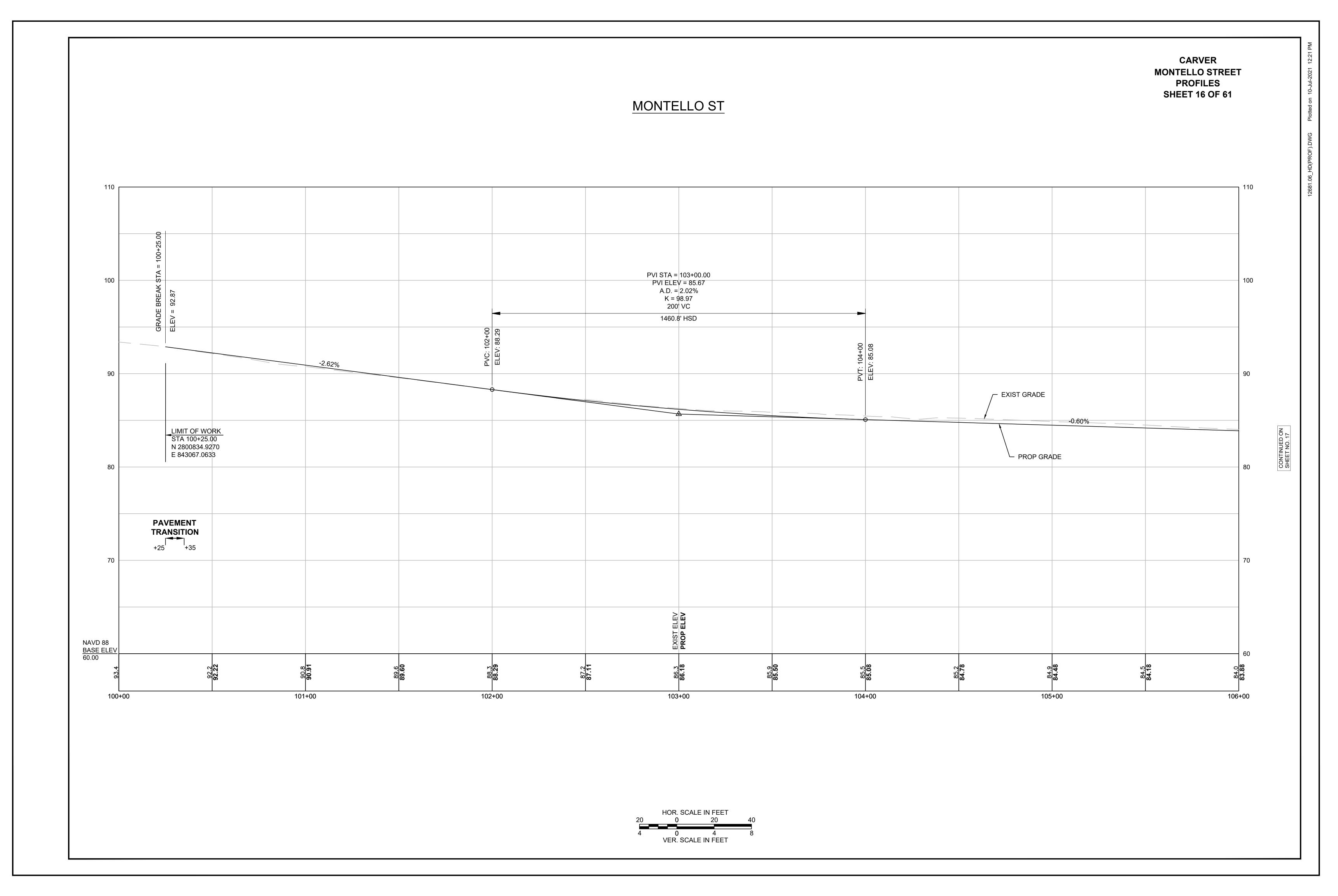


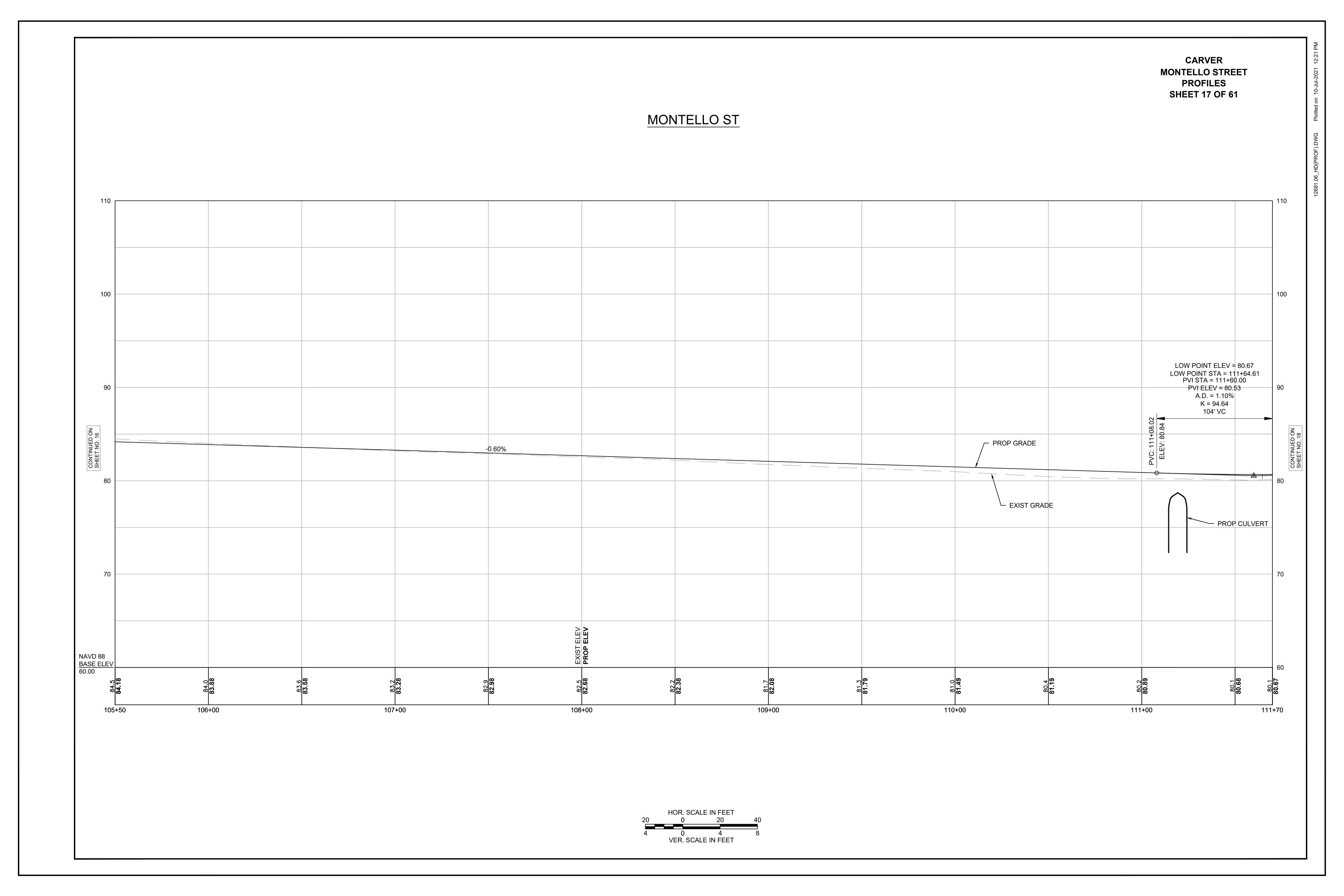
Montello Street Wetland Mitigation Area Planting Schedule (2,200 square feet)

<b>Common Name</b>	Scientific Name	Number	Size
Trees			
Red Maple	Acer rubrum	10	2-3 feet
Green Ash	Fraxinus pennsylvanica	10	2-3 feet
Shrubs			
Highbush Blueberry	Vaccinium corymbosum	10	18-24 inches
Silky Dogwood	Cornus amomum	10	18-24 inches
Northern Arrow-wood	Viburnum recognatium	10	18-24 inches
Pussy Willow	Salix discolor	10	18-24 inches
-		<del>60</del>	

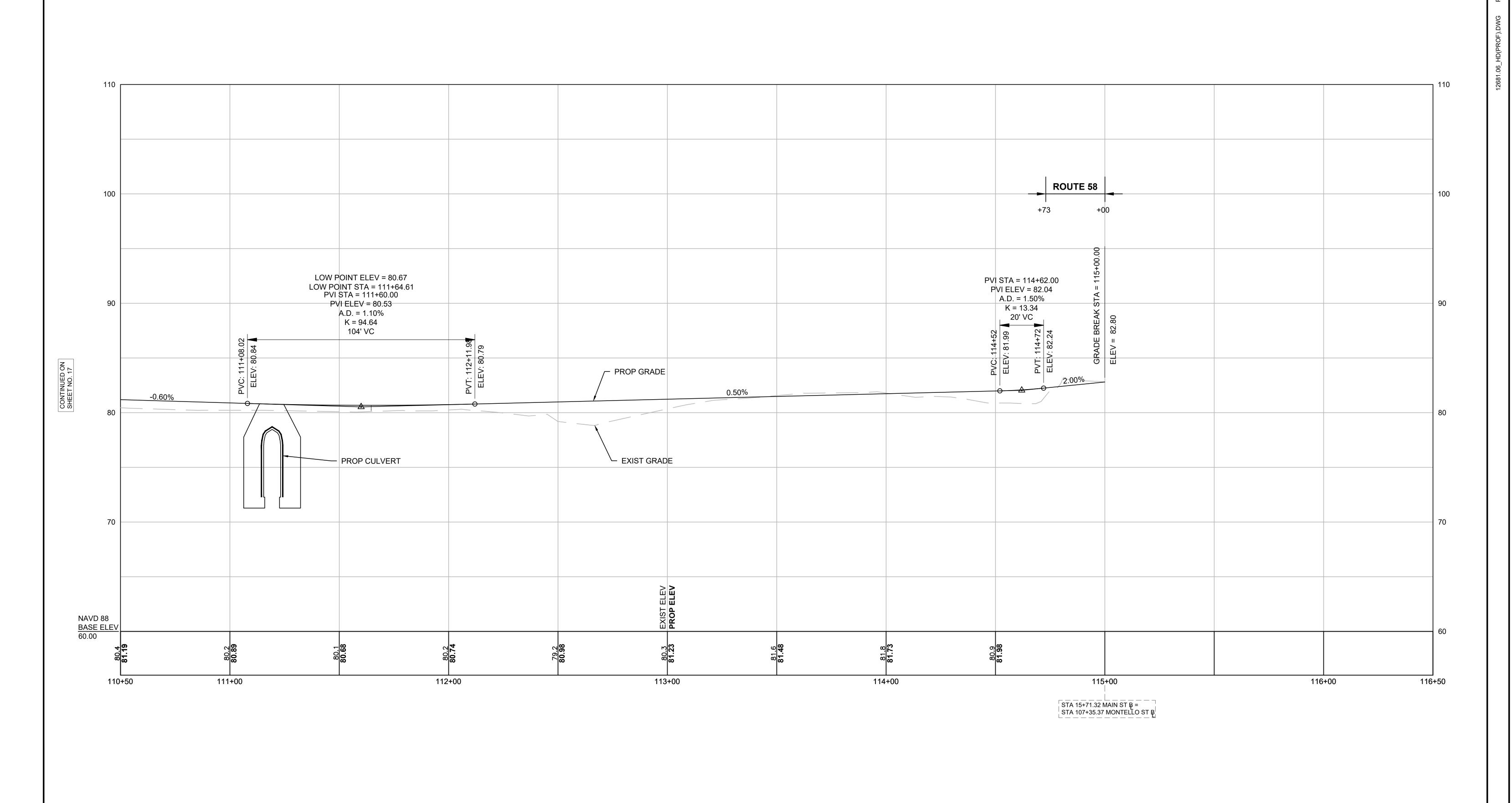


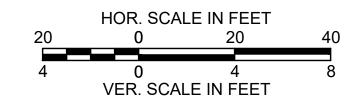


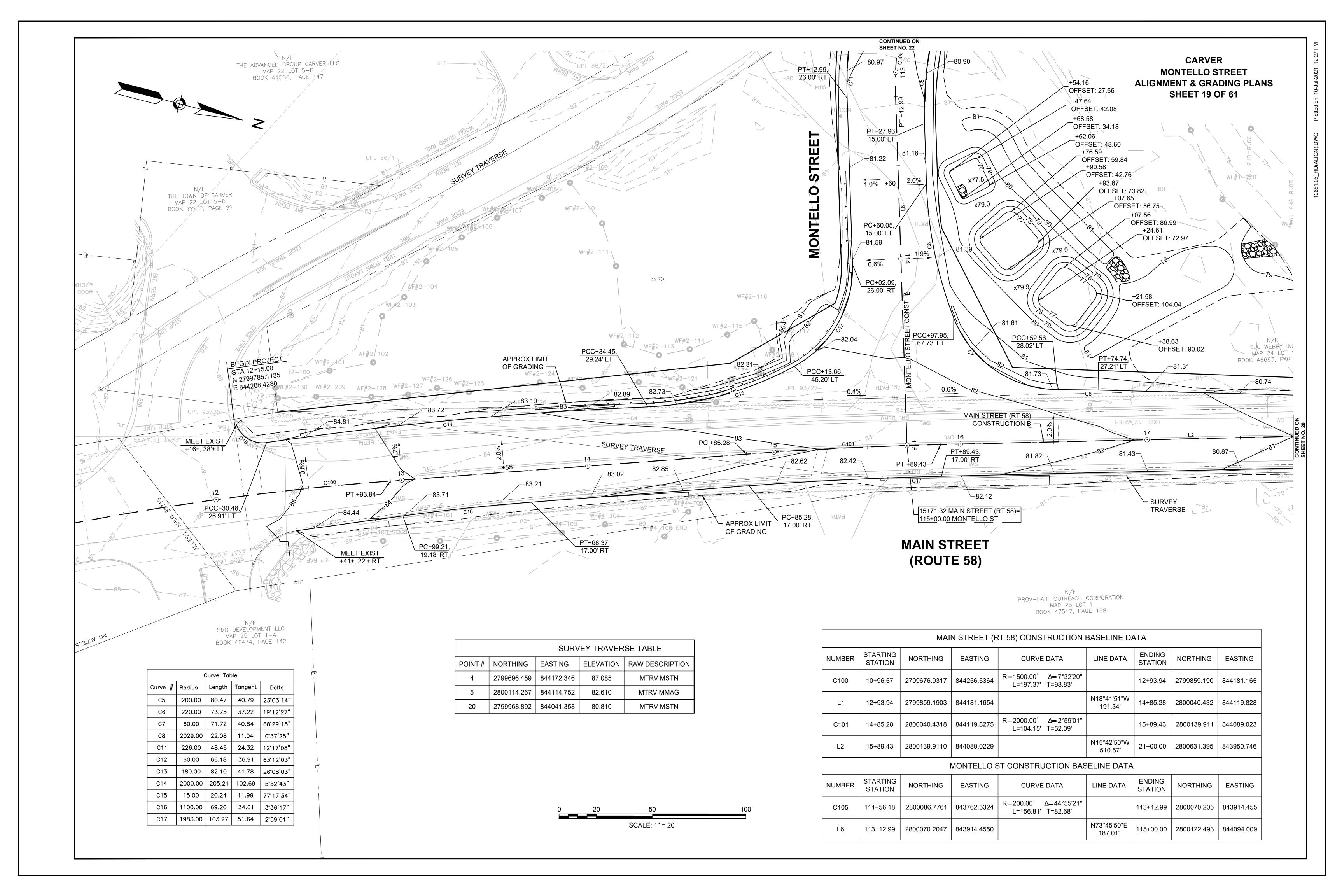


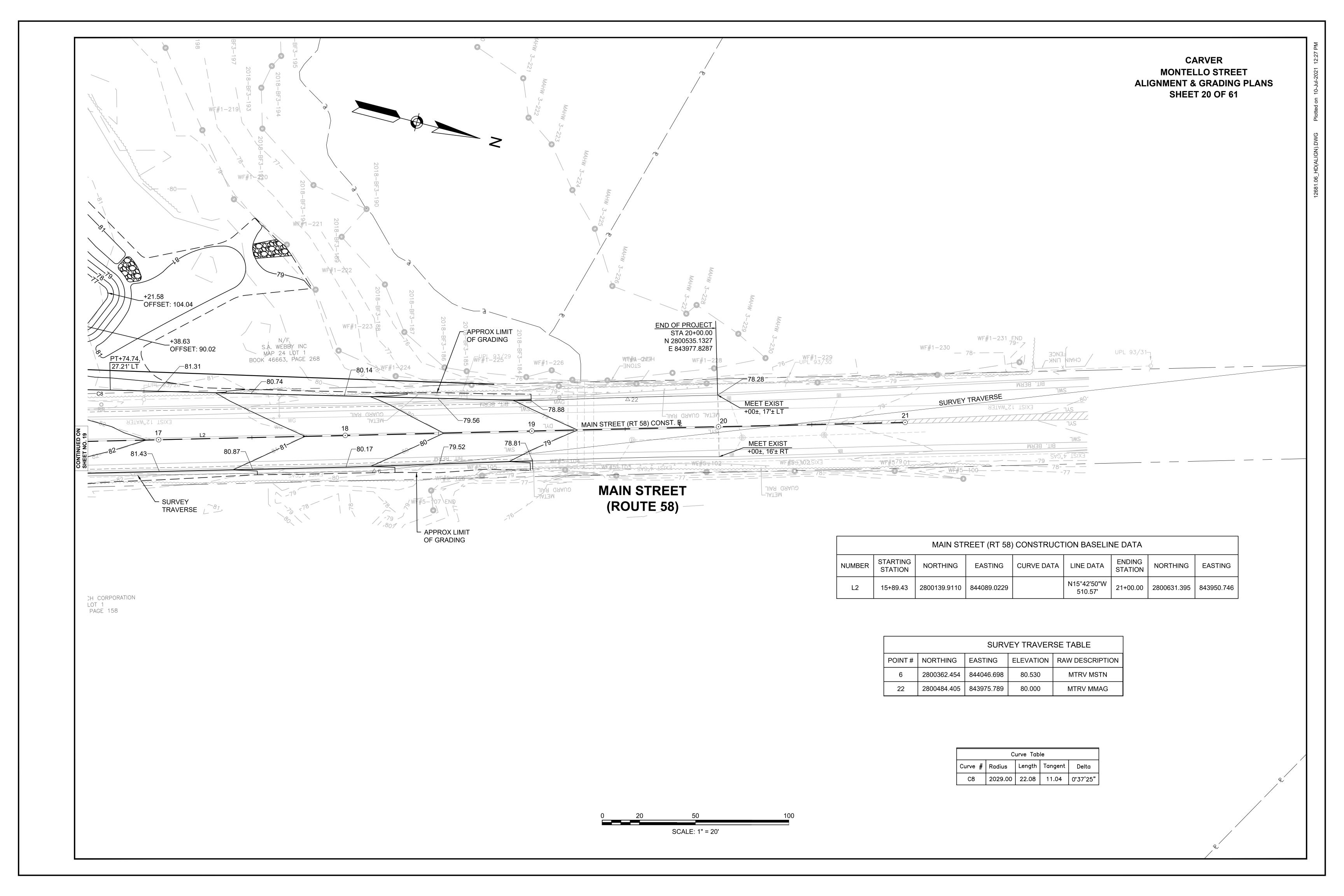


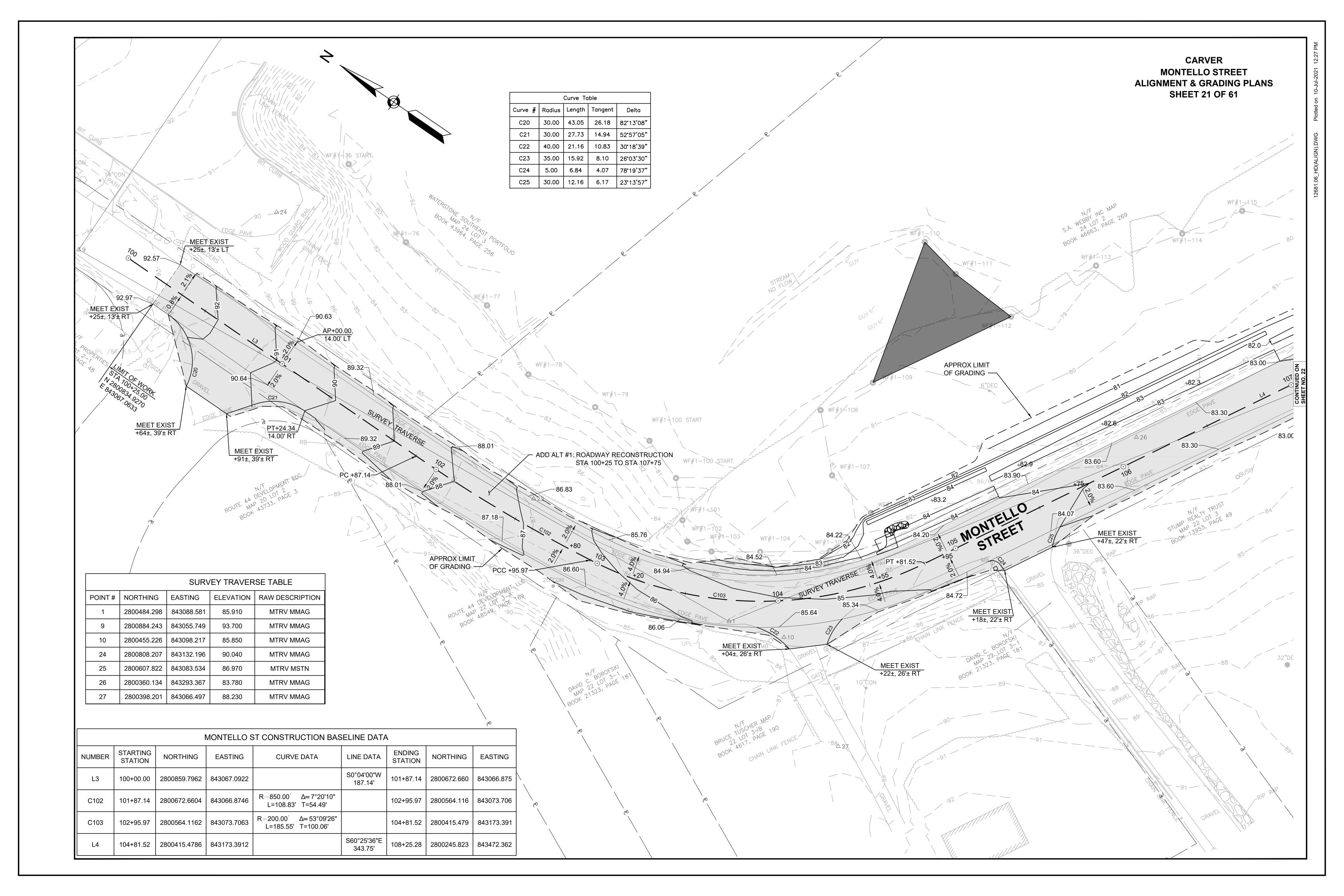
# **MONTELLO ST**

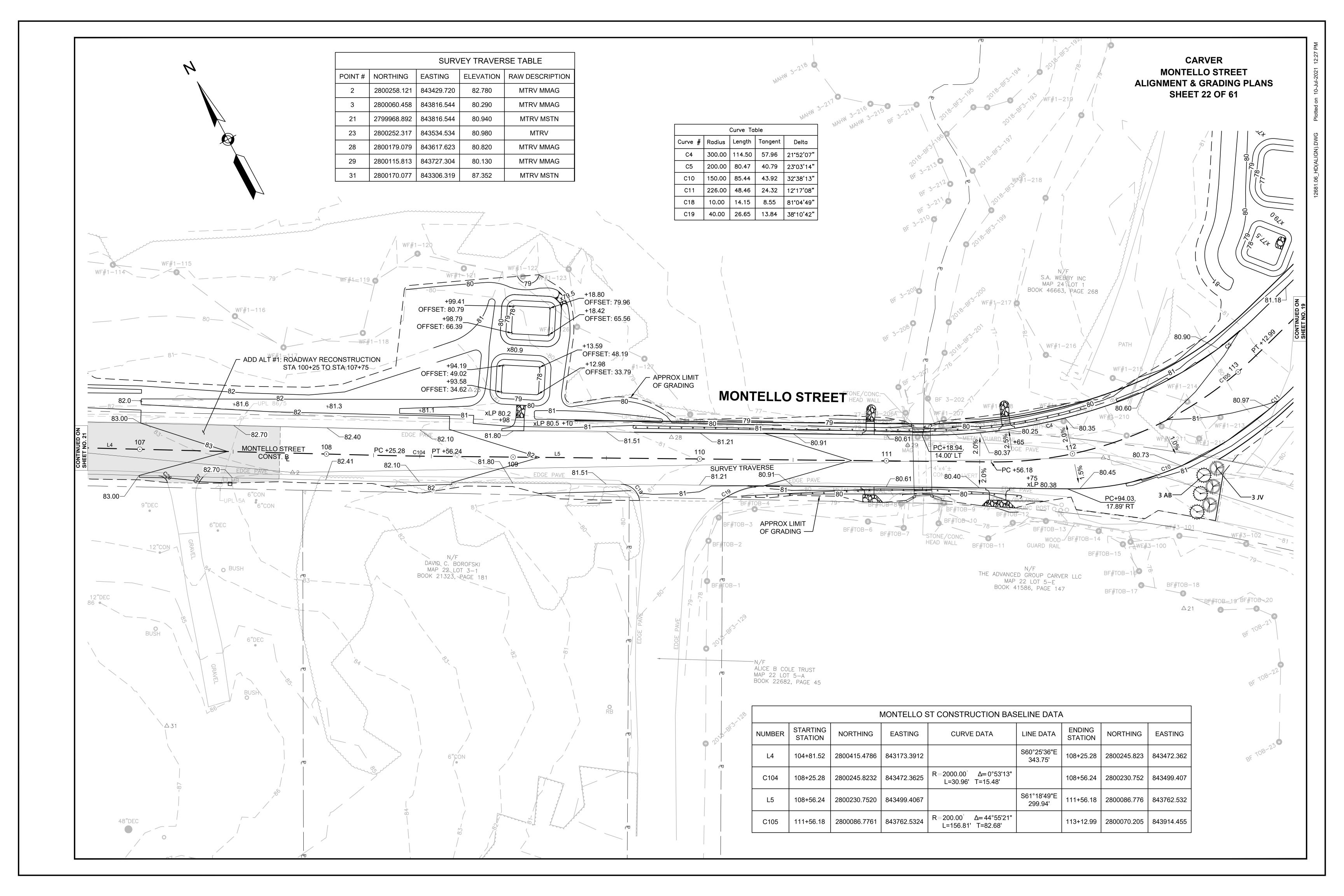


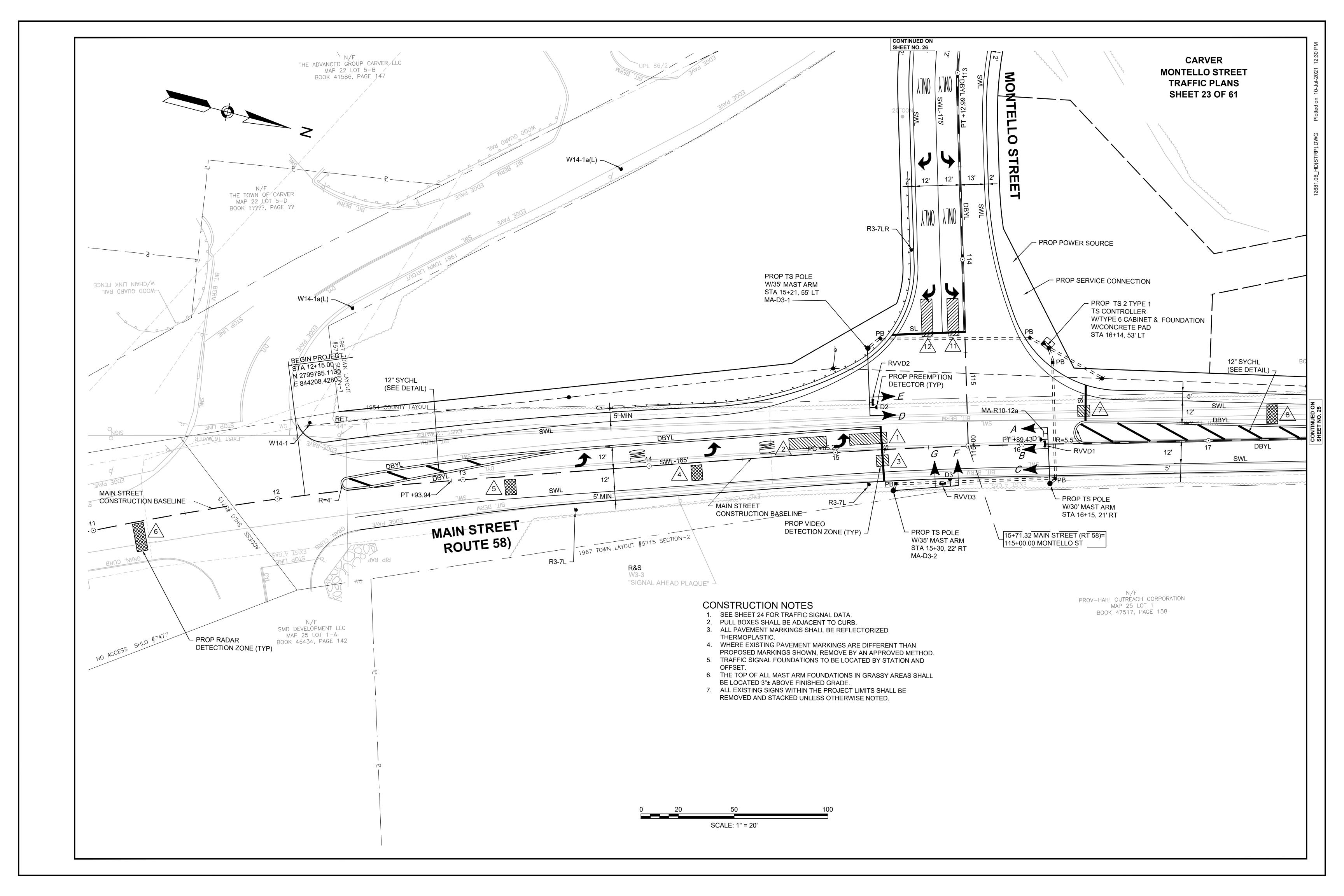












- 1. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
- 2. THE RIGHT OF WAY MAY BE ASSIGNED TO ANY PHASE OR ANY COMBINATION OF NON-CONFLICTING PHASES.
- 3. IF CALLS EXIST ON ALL PHASES, THE ASSIGNMENT OF RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE PREFERENTIAL PHASE SEQUENCE.
- 4. IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO CHANGE DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATION FOR THAT MOVEMENT WILL DISPLAY THE APPROPRIATE CLEARANCE INTERVALS.

TRAFFIC SIGNAL CONTROLLER SHALL BE PROGRAMMED PER PLANS BUT INTERSECTION TO REMAIN IN CONTINUOUS FLASHING OPERATION UNTIL SUCH TIME THAT THE SIGNAL IS WARRANTED.

# EMERGENCY VEHICLE PRE-EMPTION OPERATION

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE OPTICALLY TRANSMITTED BY OPTICAL EMITTERS MOUNTED IN EMERGENCY VEHICLES AND RECEIVED BY OPTICAL DETECTORS LOCATED AT EACH INTERSECTION.

#### 2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH DETECTORS D1, D2 OR D3 ASSIGNED DESCENDING PRIORITIES AS FOLLOWS: (D1 HIGHEST AND D3 LOWEST)

#### 3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY OPTICAL DETECTOR D1 (OR D2, D3) THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD IN EMERGENCY VEHICLE PRE-EMPTION PHASE #1 (OR #2, #3) GREEN FOR A MINIMUM OF TEN (10) SECONDS OR UNTIL PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE CLEARANCES FOR THE ASSOCIATED PHASE(S) AS SHOWN IN THE SEQUENCE AND TIMING CHART AND SERVICE SUBSEQUENT EMERGENCY VEHICLE PRE-EMPTION PHASES AS NECESSARY.

#### 4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. PRE-EMPTION STROBE SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PRE-EMPTION GREEN IS ACTIVE.

# PRE-EMPTION PHASING & PRIORITY

DETECTOR & PRIORITY	PRE-EMPT PHASE ASSIGNMENT	MOVEMENT	VEHICLE PHASE ASSIGNMENT
D1	1	<b>→</b>	Ø2&Ø5
D2	2	*	Ø6
D3	3	JL	Ø4

MAIN STRE	ET(ROUTE 58)	AT MONTELLO STREET
PAY ITEM	QUANTITY	DESCRIPTION
	1	8Ø TS 2 TYPE 1 CONTROLLER IN A TYPE 6 BASE MOUNTED CABINET INCLUDING FOUNDATION AND CONCRETE PAD
	1	TS 30' MAST ARM TYPE 2, STEEL, INCL. FOUNDATION
	2	TS 35' MAST ARM TYPE 2, STEEL, INCL. FOUNDATION
	5	SIGNAL HEAD, 3-SECTION, 12" LENSES
	1	SIGNAL HEAD, 4-SECTION, 12" LENSES
815.1	1	SIGNAL HEAD, 5-SECTION, 12" LENSES
013.1	1	RADAR/VIDEO VEHICLE DETECTION SYSTEM (3 SENSORS, VDP & CABLES)
	1	EMERGENCY PRE-EMPTION OPTICAL DETECTORS & DETECTOR CABLE
	3	EMERGENCY PRE-EMPTION 4 CHANNEL PHASE SELECTOR
	1	EMERGENCY PRE-EMPTION SYSTEM CHASSIS
	1	EMERGENCY PRE-EMPTION STROBE (WHITE LENS)
	1	SERVICE CONNECTION (OVERHEAD)

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING TRAFFIC CONTROL SIGNAL.

350' ± 3" CONDUIT, SCHEDULE 80, TYPE NM

5 PULL BOX-12"x12"

LIST OF MAJOR ITEMS REQUIRED

# CECUENCE AND TRAINIC FOR FULLY A CTUATER CONTROL (1991)

ø2

PERM

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	FLASH
MAIN STREET	NB	Α				<del>(</del> FY-	<b>←</b> Y−					<del></del> R−	←R—	←R—		<del>-</del> Y-	<del>-,</del>		<del>  ,                                     </del>	<b>←</b> R−										←FY—
MAIN STREET	NB	B,C				Ğ	Y	R				R	R	R	R	R	R	R	R	R										FY
MAIN STREET	SB	D,E				R	R	R				R	R	R	R	R	R	G	Υ	R										FY
MONTELLO STREET	SB	F				R	R	R				G	Υ	R	R	R	R	R	R	R										FR
MONTELLO STREET	EB	G				R	R	R				G	Y	R	R = G	R _ _Y _	R	R	R	R										FR
														 	MING II	N SECO	NDS													
MINIMUM GREEN (INITIAL	)					10						6			6			10												
PASSAGE TIME (VEHICLE)						2						2			2			2												
MAXIMUM 1						55						10			15			30												SH KLY
MAXIMUM 2						_						_			_			_												₹ 6
YELLOW CLEARANCE							3						3			3			3											CT NOI
RED CLEARANCE								2						2			2			2										CONFLICT FLASH OPERATION ONLY
																														ο̈́
DETECTOR MEMORY				_		NC	DN-LO	CK		_		N	ON-LO	CK	N(	ON-LO	CK	N	ON-LOC	K		_			_			_		
RECALL				_			MIN			_			OFF			OFF			MIN			_			_			_		

ø6

OL 🎝 🗘

COORDINATION PHASE SPLIT TIMES

ø9

ø9

DELAY

/EXT

DEVICE

RVVD1

RVVD1

RVVD1

CALL PHASE

Ø5

Ø2

EXTEND

PHASE

Ø5

Ø2

SEE NOTE 3

# MODE

1. AUTOMATIC FLASHING OPERATION PER 2009 M.U.T.C.D., AS AMENDED.

CYCLE

COORDINATION DATA

2. OL = OVERLAP

TIMING PLAN

- PERM = PERMISSIVE
- 4. Ø4 & Ø8 DUAL ENTRY
- MAXIMUM 1 = NORMAL OPERATION MAXIMUM 2 = NOT USED
- 7. STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY.

OFFSET

ø1

ø2

øЗ

# SIGNAL HEAD DATA B.C.D,E,F G

ALL 12" LENS

- 1. ALL SIGNAL HEADS SHALL BE RIGID MOUNTED.
- 2. ALL SIGNAL HEADS SHALL BE EQUIPPED WITH 5"± NON- LOUVERED BACKPLATES. ALL BACKPLATES SHALL CONTAIN A 3" WIDE YELLOW REFLECTIVE BORDER.
- 3. ALL SIGNAL HEADS SHALL BE EQUIPPED WITH TUNNEL VISORS.

4. ALL SIGNAL DISPLAYS SHALL BE EQUIPPED WITH L.E.D. MODULES.

PREFERENTIAL PHASE SEQUENCE

Ø2 & Ø5 OL	 Ø2 & Ø	6	<b>-</b>	Ø4 ] (	<b>—</b>

4	100' FROM NB STOP LINE	RVVD1	0	Ø2	Ø2
5	200' FROM NB STOP LINE	RVVD1	2 SEC DELAY	Ø2	Ø2
6	400' FROM NB STOP LINE	RVVD1	2 SEC DELAY	Ø2	Ø2
7	MAIN STREET SB THRU-RIGHT LANE	RVVD2	0	Ø6	SEE NOTE 3
8	100' FROM SB STOP LINE	RVVD2	0	Ø6	Ø6
9	200' FROM SB STOP LINE	RVVD2	2 SEC DELAY	Ø6	Ø6
10	400' FROM SB STOP LINE	RVVD2	2 SEC DELAY	Ø6	Ø6
11	MONTELLO STREET EB LEFT LANE	RVVD3	0	Ø4	Ø4
12	MONTELLO STREET EB RIGHT LANE	RVVD3	5 SEC DELAY	Ø4	Ø4

- 1. DELAY AND EXTENSION TIMINGS SHALL BE PROGRAMMED IN THE CONTROLLER
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING PROPOSED DETECTION ZONES AS SHOWN ON THE PLANS, AND ADJUSTING/RE-ADJUSTING DETECTION ZONES IN THE PRESENCE OF THE ENGINEER.

3. ZONES 3 AND 7 SHALL BE CALLING-ONLY.

**VIDEO DETECTION DATA** 

APPROACH/LANE

MAIN STREET NB

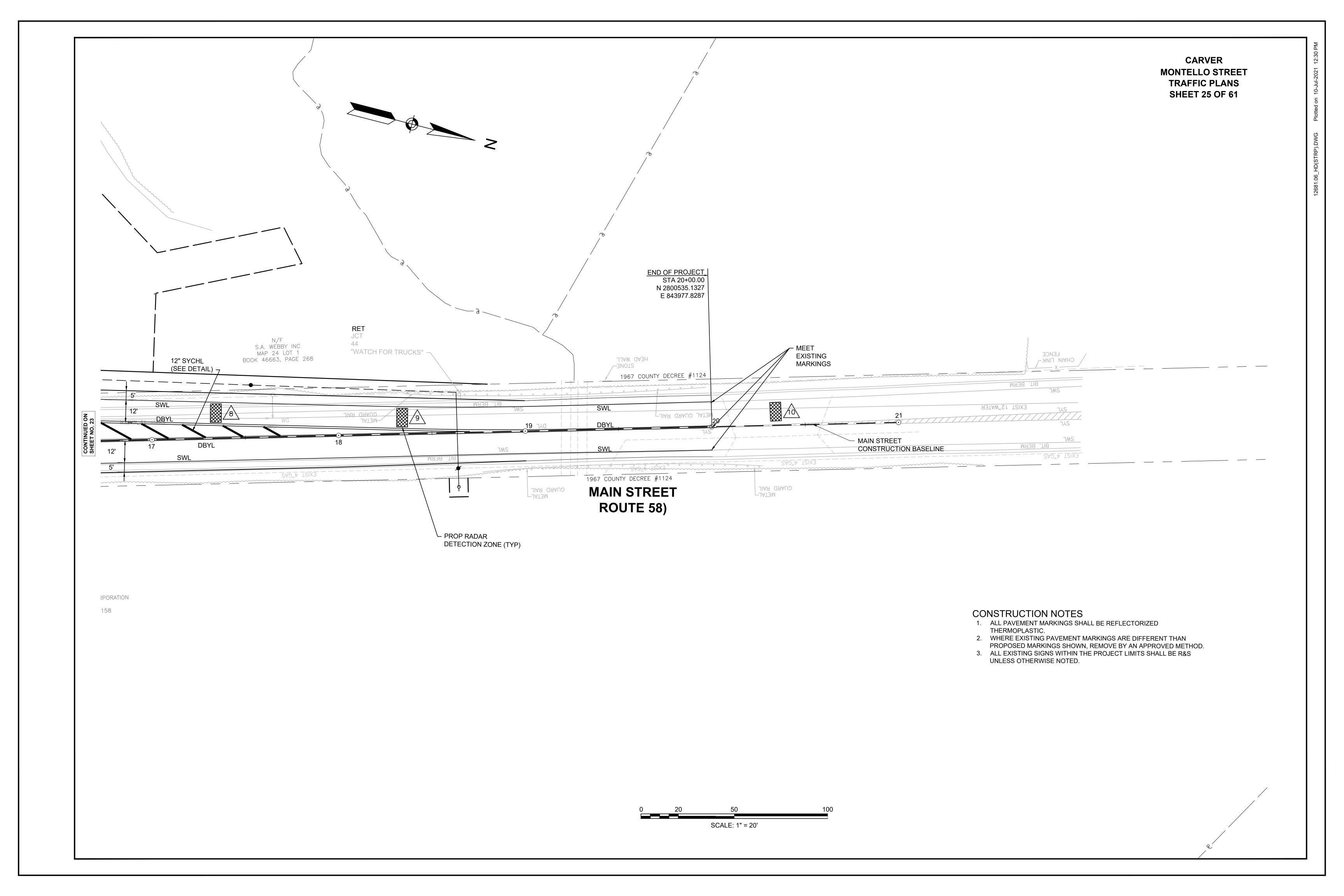
LEFT-TURN LANE

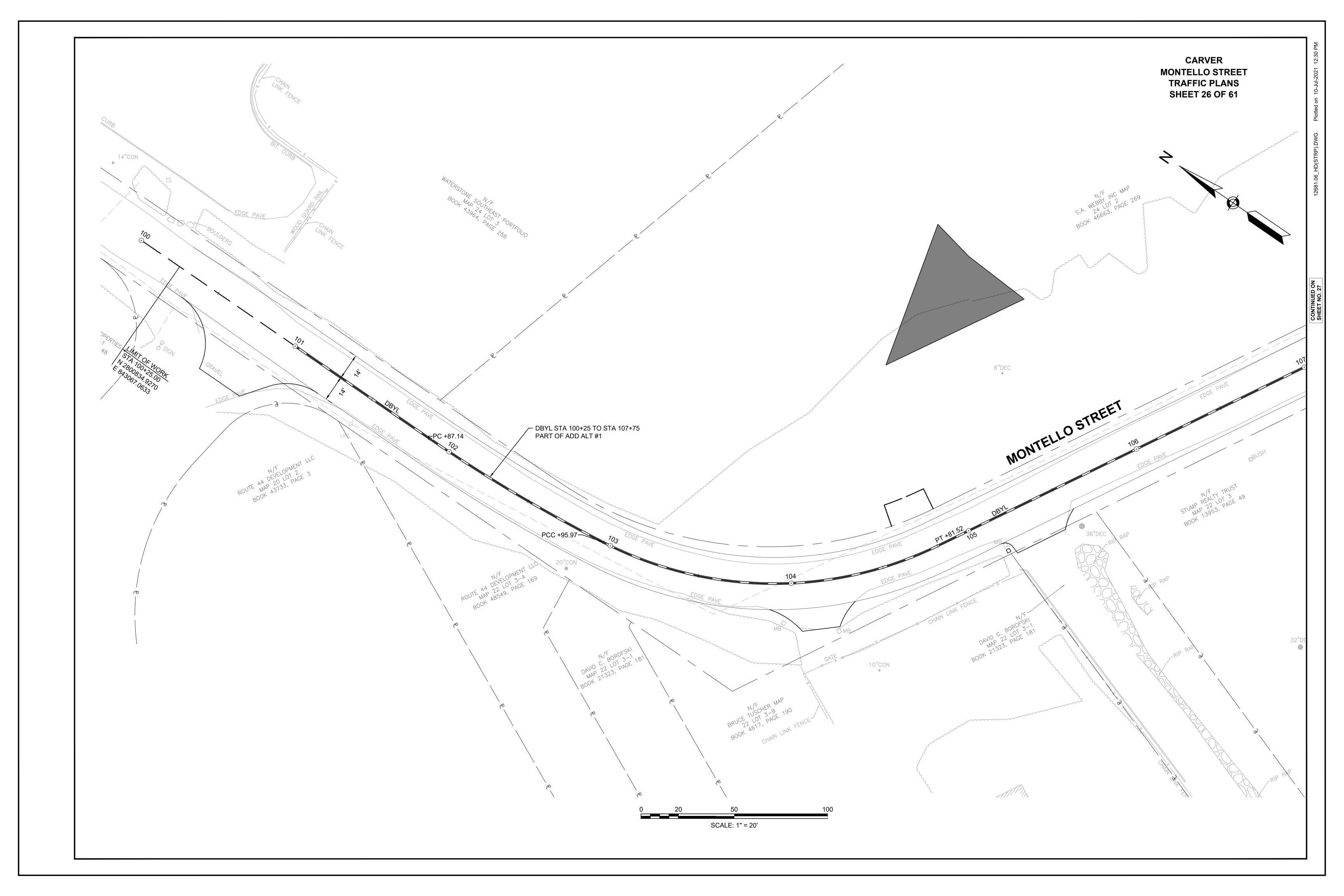
MAIN STREET NB

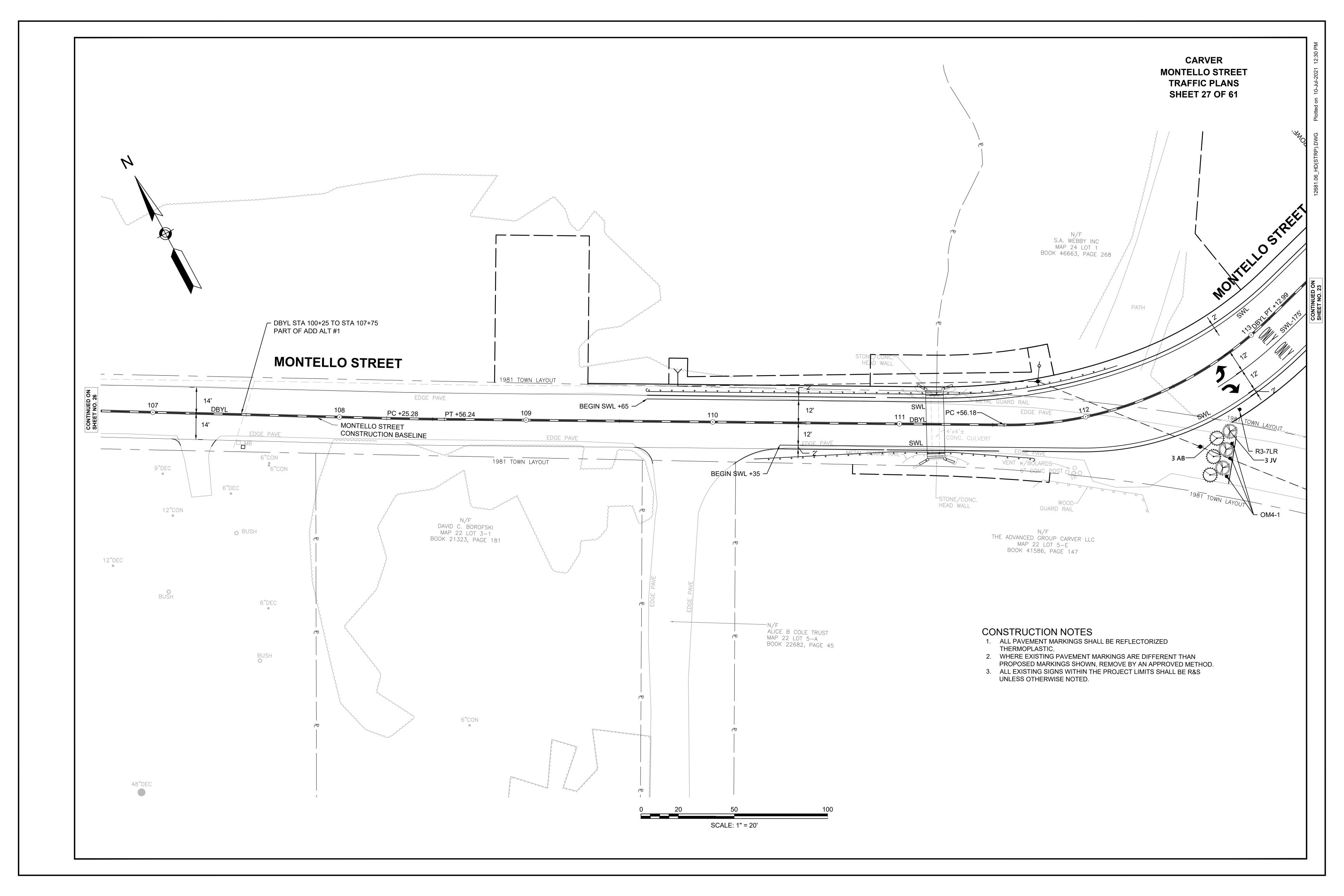
LEFT-TURN LANE

MAIN STREET NB

THRU LANE







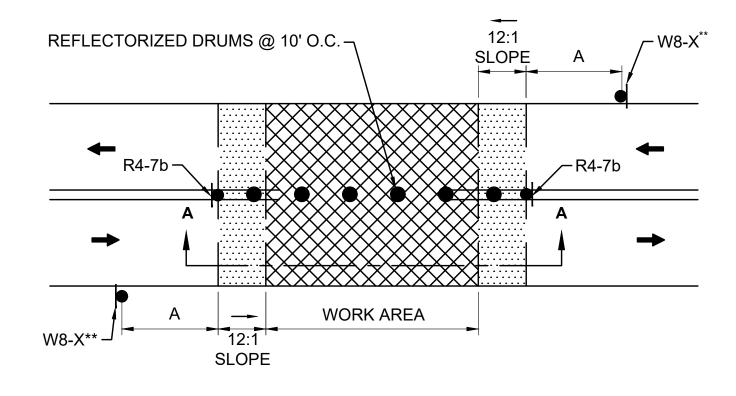
IDENTIFI-	SIZE (	F SIGN		TEXT DI	MENSIONS	(INCHES)	NUMBER OF		COLOR		POST SIZE AND	UNIT	AREA IN
CATION NUMBER	WIDTH	HEIGHT	TEXT	LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	SIGNS REQUIRED	BACK- GROUND	LEGEND	BORDER	NUMBER REQUIRED	AREA (S.F.)	SQUARE FEET
R3-7L	30"	30"	LEFT LANE MUST TURN LEFT	н	FHWA "STAN GHWAY SIGI DITION"; AS A	NS,	2	WHITE	BLACK	BLACK	2-P5	6.25	12.50
R3-7LR	30"	30"	ONLY ONLY				2	WHITE	BLACK	BLACK	2-P5	6.25	12.50
MA-R10-12a	24"	30"	LEFT TURN YIELD ON FLASHING	AS	PER MASSE STANDARD		1	WHITE	BLACK/ YELLOW	BLACK	1 MTD ON TS MAST ARM	5.00	5.00
MA-D3-1	42"	12"	Montello St	6"/4"D	3" 3"	N/A	1	GREEN	WHITE	WHITE	1 MTD ON TS MAST ARM	UNI	AID DER M 874
MA-D3-2	30"	12"	Main St	6"/4"D	3" 3"	N/A	1	GREEN	WHITE	WHITE	1 MTD ON TS MAST ARM	UNI	AID DER M 874
W14-1	30"	30"	DEAD	н	FHWA "STAN GHWAY SIGI DITION"; AS A	NS,	1	YELLOW	BLACK	BLACK	1-P5	6.25	6.25
W14-1a(L)	36"	8"	← DEAD END				2	YELLOW	BLACK	BLACK	2-P5	2.00	4.00
OM4-1	18"	18"					3	RED	RED	RED	3-P5	3.00	9.00

NOTES:

1. HIGH INTENSITY REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION" FOR TEXT DIMENSIONS, AS AMENDED; THE 1977
MASSHIGHWAY DEPARTMENT CONSTRUCTION AND TRAFFIC STANDARD DETAILS, AS AMENDED, FOR SIGNS AND SUPPORTS; AND THE MASSHIGHWAY DEPARTMENT SIGN LISTINGS 1993
EDITION, AS AMENDED.

- 3. NO WORK SHALL OCCUR WITHIN THE PUBLIC WAY THE DAY BEFORE. AFTER OR ON A STATE RECOGNIZED HOLIDAY UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- 4. ALL DRUMS OUTSIDE TAPERS SHALL BE SET AT 40' ON CENTER MAX. FOR ROUTE 58 AND 20' ON CENTER MAX. FOR ALL OTHER ROADWAYS UNLESS OTHERWISE NOTED OR ADJUSTED BY THE ENGINEER.
- 5. ALL DRUMS WITHIN TAPERS SHALL BE SET AT 20' ON CENTER MAX. FOR ROUTE 58 AND 10' ON CENTER MAX. FOR ALL OTHER ROADWAYS UNLESS OTHERWISE NOTED OR ADJUSTED BY THE ENGINEER.
- 6. ALL DRUMS SHALL BE APPROXIMATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN SAFE AND REASONABLE ABUTTER ACCESS WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS AND OTHER TRAFFIC CONTROL DEVICES, GRADING AND TEMPORARY PAVEMENT FOR PASSAGE OF PEDESTRIAN. VEHICULAR AND EMERGENCY TRAFFIC THROUGH THE WORK AREAS. BOTH DURING AND AFTER WORKING HOURS, TO MAINTAIN SUCH ACCESS.
- 7. THE FIRST 10 DRUMS ON TAPERS WITHIN MASSDOT JURISDICTION SHALL BE REFLECTORIZED DRUMS WITH SEQUENTIAL FLASHING WARNING LIGHTS AND SHALL BE OPERATING, AT A MINIMUM, BETWEEN DUSK AND DAWN, WHEN TAPER IS DEPLOYED.
- 8. REFLECTORIZED CONES SHALL BE A MINIMUM OF 36 INCHES IN HEIGHT.
- 9. CONES MAY BE USED IN LIEU OF DRUMS OUTSIDE OF TAPER AREAS.
- 10. THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OR RESTRICTION OF ACCESS.
- 11. FOR DROP-OFFS 3" OR LESS WITHIN THE CLEAR ZONE, CONDITION MAY BE MITIGATED WITH W8-9 (LOW SHOULDER) SIGN OR TEMPORARY CHANNELIZATION DEVICES.
- 12. CONTRACTOR SHALL STAGE WORK SUCH THAT A DROP-OFF OF NO MORE THAN 3" AT THE END OF EACH WORK DAY EXISTS WITHIN THE CLEAR ZONE AT ANY TIME AND ENSURE DROP-OFF IS MITIGATED WITHOUT BARRIER PER NOTE 11. FOR DROP-OFFS GREATER THAN 3" BUT NO MORE THAN 36", DETERMINE WHETHER IT IS MORE COST EFFECTIVE TO INSTALL BOTH W8-9 SIGN AND TEMPORARY CHANNELIZATION DEVICES IN ACCORDANCE WITH MASSDOT WORK ZONE SAFETY GUIDE OR W8-9 SIGN WITH A 2H:1V (MIN) WEDGE OR TO REMOVE THE HAZARD. FOR DROP-OFFS 36" OR GREATER USE TEMPORARY BARRIER IN ACCORDANCE WITH MASSDOT WORK ZONE POSITIVE PROTECTION GUIDELINES.
- 13. CONSTRUCTION CLEAR ZONE SHALL BE IN ACCORDANCE WITH MASSDOT BOSTON TRAFFIC GUIDELINES AS FOLLOWS: 4' IF POSTED SPEED IS LESS THAN 35 MPH
  - 8' IF POSTED SPEED IS 35 MPH

  - 15' IF POSTED SPEED IS 40 MPH 20' IF POSTED SPEED IS 45 MPH
  - 25' IF POSTED SPEED IS 55 MPH
- 14. ALL TEMP BARRIERS SHALL MEET OR EXCEED MASH TL-2 REQUIREMENTS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- 15. THE CONTRACTOR SHALL PROVIDE TEMPORARY IMPACT ATTENUATORS TO PROTECT ALL BLUNT-ENDS OF TEMPORARY BARRIER OR AS REQUIRED BY THE ENGINEER. TEMPORARY IMPACT ATTENUATORS SHALL BE DESIGNED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF WORK. ALL TEMPORARY IMPACT ATTENUATORS SHALL BE DESIGNED TO MEET OR EXCEED MASH TEST LEVEL 2 (TL-2).
- 16. 11' MINIMUM LANE WIDTHS SHALL BE MAINTAINED UNLESS OTHERWISE NOTED.
- 17. TEMPORARY TRAFFIC CONTROL DEVICES AND SIGNS SHALL BE COVERED OR REMOVED DURING NON-WORKING HOURS WHEN NOT IN USE.
- 18. SIGNS INSTALLED ON PORTABLE STANDS REQUIRE 12 INCH MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF THE SIGN.
- 19. SIGNS INSTALLED ON PORTABLE STANDS PLACED AMONG CHANNELIZATION DEVICES REQUIRE A 36 INCH MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF THE SIGN.
- 20. SIGNS MOUNTED ON POSTS REQUIRE A MINIMUM 84 INCH MOUNTING HEIGHT FROM THE ROADWAY OR SIDEWALK SURFACE TO THE BOTTOM OF THE SIGN. CONTRACTOR SHALL MAINTAIN A MINIMUM SIDEWALK HORIZONTAL CLEAR WIDTH OF 36" AT ALL TIMES.
- 21. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN NCHRP 350 AND/OR MASH CRASH TESTED SIGN SUPPORTS AND INSTALLED IN ACCORDANCE WITH THE MUTCD.SIGNS SHALL NOT BE MOUNTED TO OR LEANED AGAINST DRUMS OR CONES.
- 22. W21-7 SIGNS SHALL BE INSTALLED IN ADVANCE (100' MIN) OF AREAS WHERE UTILITY CASTINGS HAVE BEEN RAISED IN ADVANCE OF PAVING OPERATIONS OR AS REQUESTED BY THE ENGINEER.
- 23. W8-15 SIGNS SHALL BE INSTALLED IN ADVANCE (100' MIN) OF PAVEMENT MILLING AREAS OR AS REQUESTED BY THE ENGINEER.
- 24. CONTRACTOR SHALL SECURE WORK AREAS BY APPROPRIATE MEANS, TO PREVENT UNAUTHORIZED ACCESS AT ALL TIMES.
- 25. THERE IS NO DESIGNATED BICYCLE LANE ON THE ROADWAY WITHIN THE PROJECT LIMITS. BICYCLES ARE EXPECTED TO SHARE THE ROAD WITH GENERAL VEHICULAR TRAFFIC.
- 26. NIGHTTIME WORK FOR CERTAIN CONSTRUCTION ACTIVITIES, SUCH AS FULL DEPTH PAVEMENT ON ROUTE 58, MAY BE ALLOWED UPON APPROVAL FROM THE TOWN OF CARVER.
- 27. ILLUMINATION REQUIRED FOR NIGHTTIME WORK APPROVED BY THE ENGINEER SHALL BE DIFFUSED OR ANTI-GLARE LIGHTING AND IN ACCORDANCE WITH MASSDOT STANDARDS.
- 25. FOR GUARDRAIL WORK AT THE CULVERT CROSSING ON MONTELLO STREET, CONTRACTOR TO ENSURE THAT THE REMOVAL OF EXISTING GUARDRAIL DOES NOT EXPOSE UNPROTECTED DROP-OFF CONDITION TO ERRANT VEHICLES AND IS ADEQUATELY SHIELDED AT ALL TIMES. THE ROADSIDE PROTECTIVE MEASURE SUCH AS BARRIER AND IMPACT ATTENUATOR, AS NEEDED, SHALL BE APPROVED BY THE TOWN OF CARVER.
- 26. CONTRACTOR SHALL PROVIDE THREE (3) PORTABLE CHANGEABLE MESSAGE SIGN A MINUMUM OF 14 DAYS PRIOR AND 7 DAYS POST START OF CONSTRUCTION. PCMS LOCATION AND MESSAGING SHALL BE AS APPROVED BY THE TOWN OF CARVER.
- 27. CONTRACTOR TO STAGE THE FULL DEPTH PAVEMENT CONSTRUCTION SUCH THAT PAVEMENT EDGE DROP-OFFS BETWEEN ADJACENT, OPEN TRAVEL LANES ON ROUTE 58 SHALL NOT EXCEED 2 INCHES UNLESS APPROVED BY THE TOWN OF CARVER.





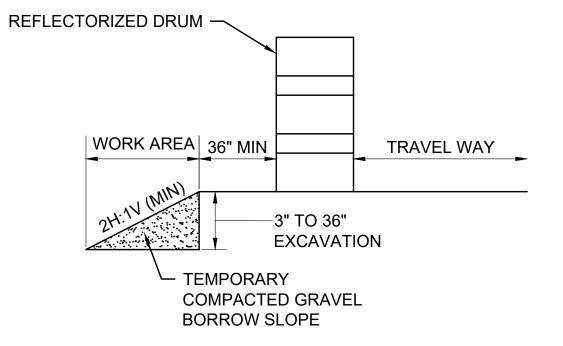
#### **SECTION A-A**

1. SQUARE OFF THE FULL WIDTH OF THE ROADWAY AT THE END OF WORK DAY.

2. ** CONTRACTOR SHALL INSTALL W8-1, W8-3, W8-8, OR W8-15 SIGN, AS APPROPRIATE, ON ALL ROADWAYS IN ADVANCE OF THE TRANSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

## **TEMPORARY PAVEMENT TRANSITION**

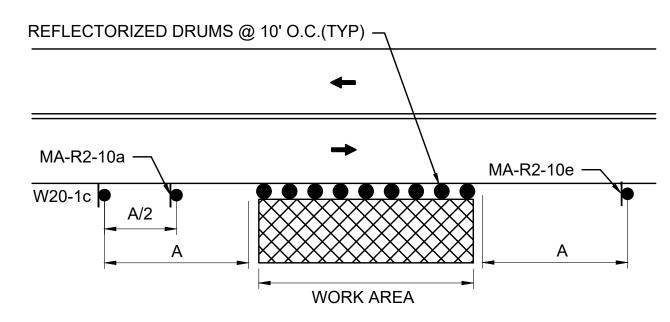
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1. CONTRACTOR SHALL INSTALL W8-9 SIGN ON ALL ROADWAYS 350 FT IN ADVANCE OF THE START OF DROP-OFF CONDITION.

# TYPICAL ROADWAY DROP-OFF PROTECTION

SCALE: NTS



1. SEE TTCP GENERAL NOTES FOR ADDITIONAL INFORMATION.

# **OFF ROADWAY WORK - RIGHT**

SCALE: NTS

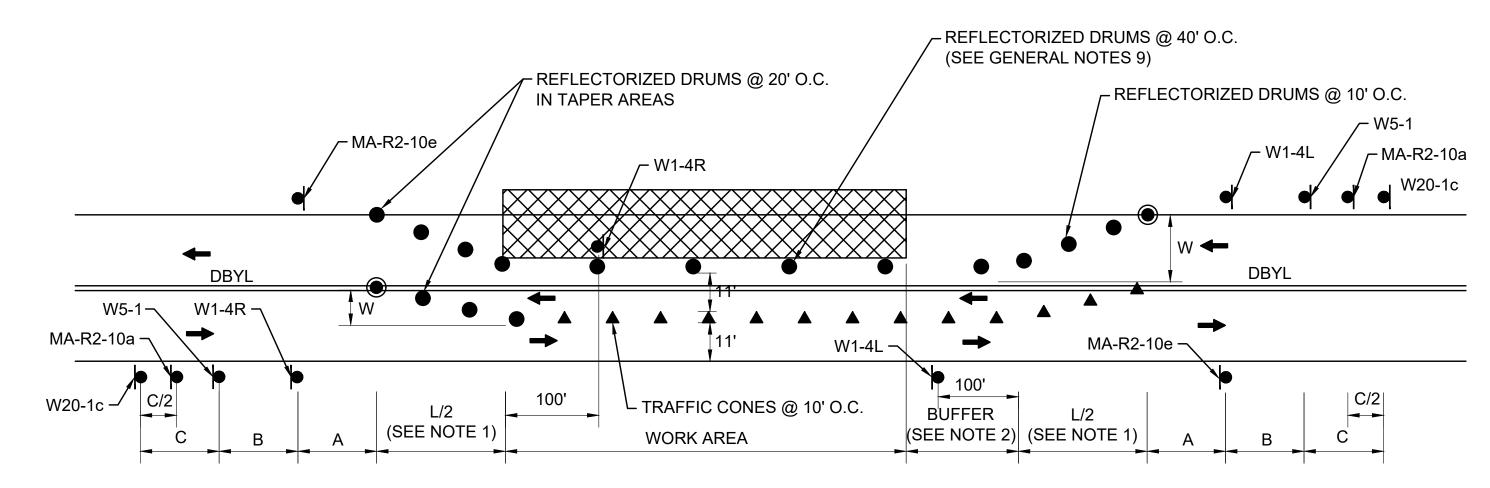
# CARVER MONTELLO STREET TEMPORARY TRAFFIC CONTROL PLANS **SHEET 29 OF 61**

LEGE	END
P	POLICE OFFICER
•	REFLECTORIZED DRUM
•	REFLECTORIZED DRUMS WITH SEQUENTIAL FLASHING WARNING LIGHTS (SEE NOTE 7)
•	TEMPORARY CONSTRUCTION SIGN
•	TRAFFIC CONE
-	TYPE III BARRICADE
	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
	TEMPORARY BARRIER
	TEMPORARY IMPACT ATTENUATOR (TYPE NOTED)
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	TRANSITION/BUFFER AREAS
<b>←</b>	TRAFFIC FLOW
NTS	NOT TO SCALE

ADVANCE SIGN S	SPACING		
	DISTANCE E	BETWEEN SI	SIGNS (FEET) C 500 350 100
ROADWAY	Α	В	С
N MAIN ST (ROUTE 58)	500	500	500
ROUTE 44 RAMPS	350	350	350
ALL OTHER ROADWAYS	100	100	100

LANE TAPER LENGTH FORMULAS  L= TAPER LENGTH IN FEET  W= WIDTH OF ROADWAY TO BE SHIFTED OR REDIRECTED IN FEET									
					S= POSTED SPEED LIMIT IN MPH				
					POSTED SPEED				
40 MPH OR LESS	GREATER THAN 40 MPH								
$L = \frac{WS^2}{60}$	L= WS								

BUFFER SI	MPH) (FEET)  15 80  20 115  25 155  30 200  35 250  40 305  45 360
SPEED (MPH)	
15	80
20	115
25	155
30	200
35	250
40	305
45	360
50	425

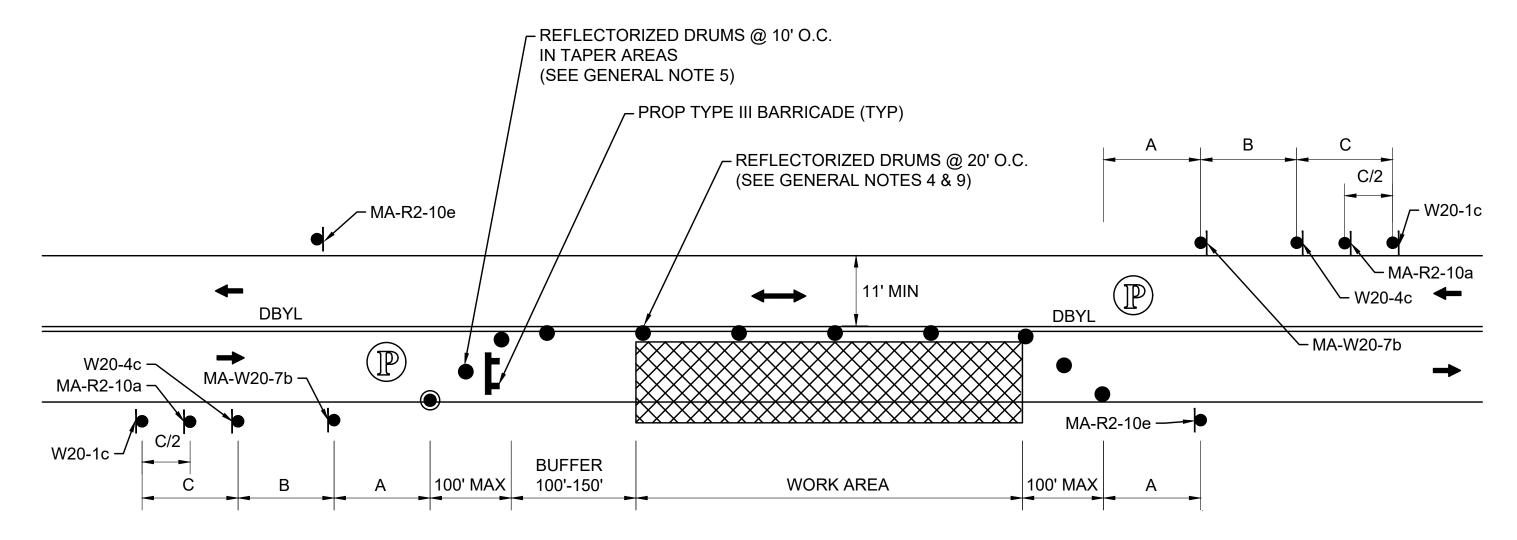


#### NOTES

- 1. SEE TAPER LENGTH FORMULA ON SHEET 29.
- SEE BUFFER SPACING CHART ON SHEET 29.
   REFER TO ADVANCE SIGN SPACING TABLE ON SHEET 29.

# **TYPICAL TWO-WAY STREET LANE SHIFT (ROUTE 58)**

SCALE: NTS



# NOTE

1. REFER TO ADVANCE SIGN SPACING TABLE ON SHEET 29.

# TYPICAL TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC

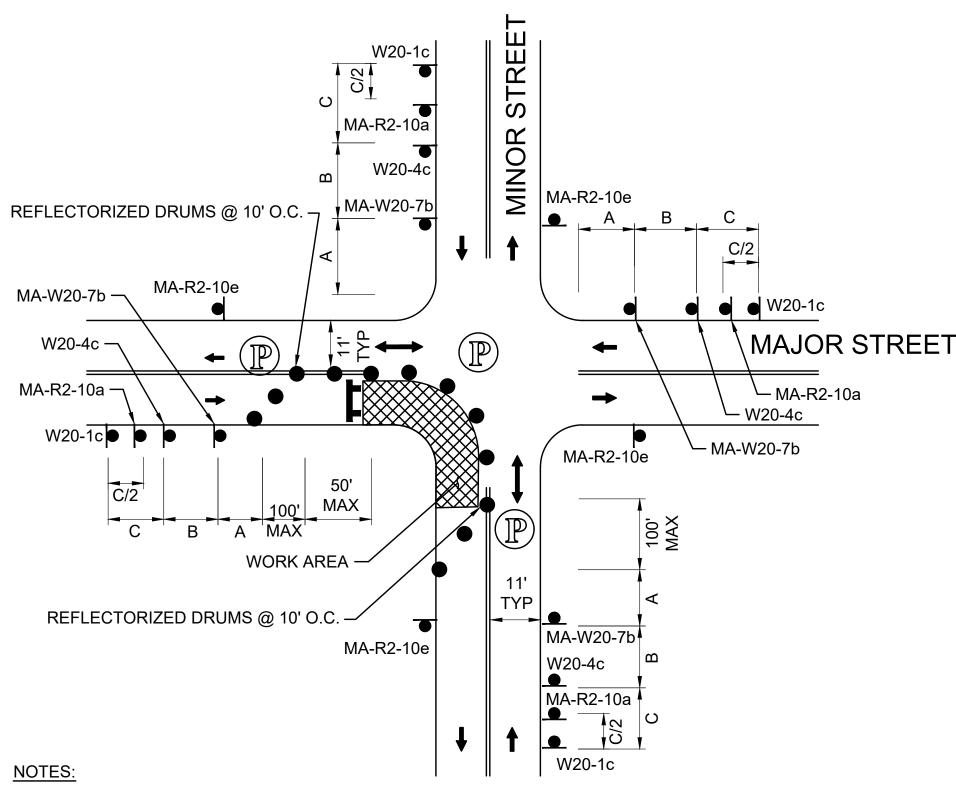
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CARVER

MONTELLO STREET

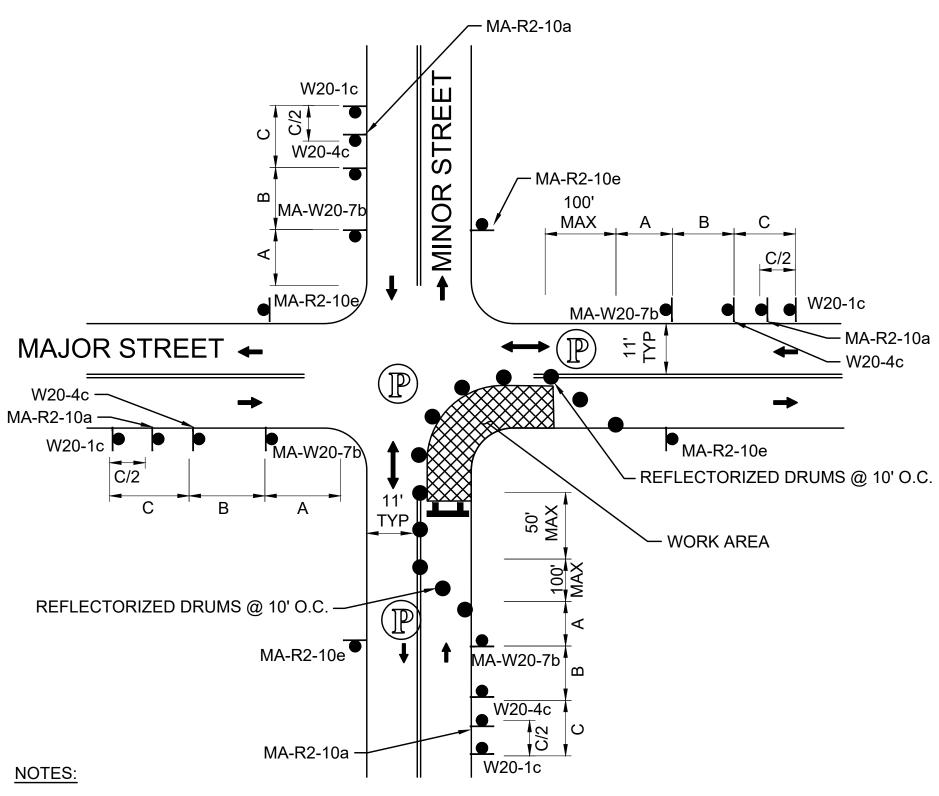
TEMPORARY TRAFFIC CONTROL PLANS

SHEET 30 OF 61



- 1. ADVANCE WARNING SIGN PLACEMENT TO BE ADJUSTED AS NECESSARY.
- 2. REFER TO ADVANCE SIGN SPACING TABLE ON SHEET 29.

# ONE LANE BI-DIRECTIONAL TRAFFIC AT-INTERSECTIONS - NEAR SIDE SCALE: NTS

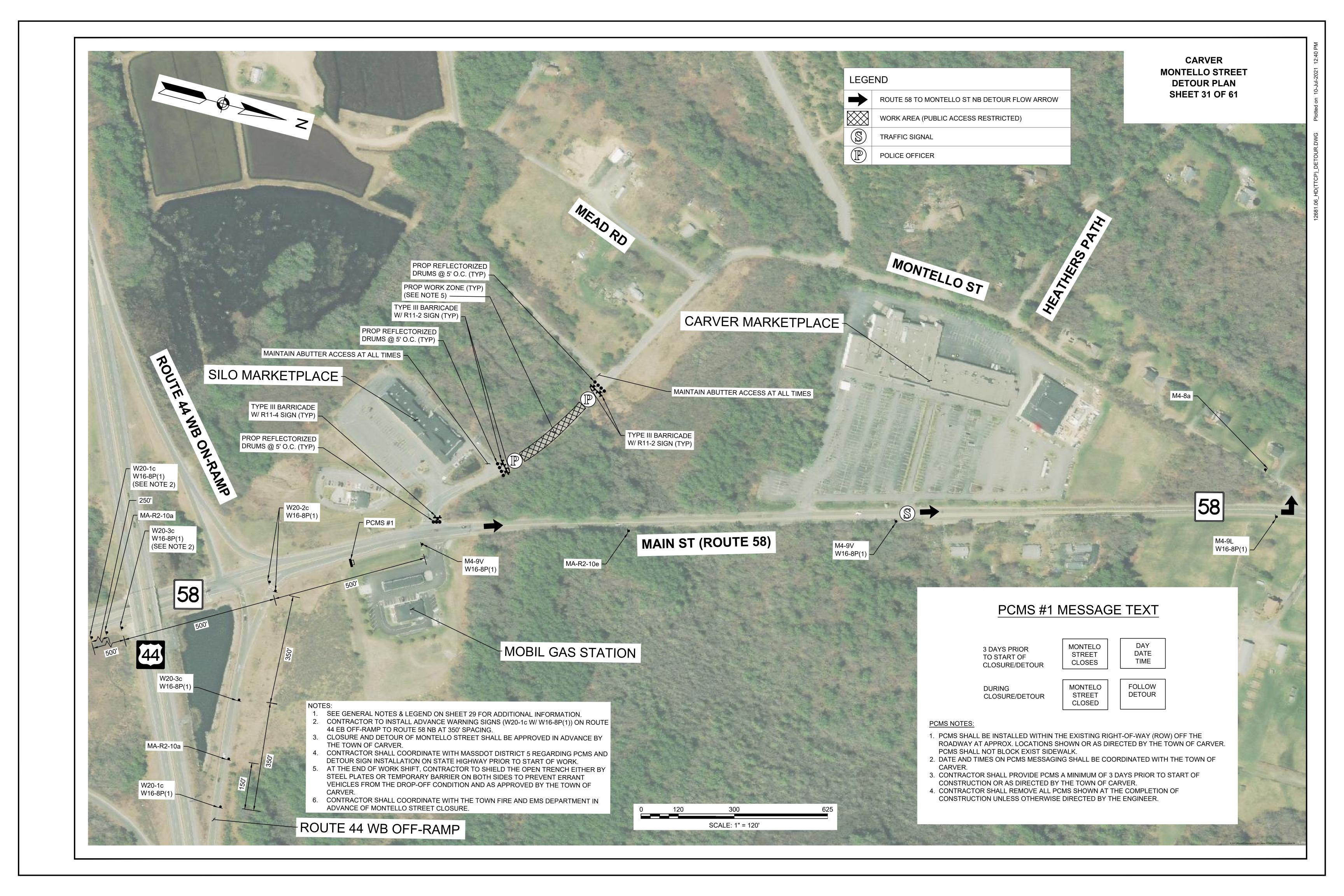


- 1. ADVANCE WARNING SIGN PLACEMENT TO BE ADJUSTED AS NECESSARY.
- 2. REFER TO ADVANCE SIGN SPACING TABLE ON SHEET 29.

# ONE LANE BI-DIRECTIONAL TRAFFIC AT INTERSECTIONS - FAR SIDE

SCALE: NTS

12681.06_HD(TTCP).DWG Plotted on 10-Jul



IDENTIFI-	SIZE OF SIGN			TEXT DI	TEXT DIMENSIONS (INCHES)			COLOR		
CATION NUMBER	WIDTH	HEIGHT	TEXT	LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK- GROUND	LEGEND	BORDER	
MA-R2-10a	48"	36"	WORK ZONE  SPEEDING FINES DOUBLED	AS PER MASSDOT  STANDARD			FLUOR- ESCENT ORANGE WHITE	BLACK	BLACK	
MA-R2-10e	36"	48"	END ROAD WORK DOUBLE FINES END		V		FLUOR- ESCENT ORANGE WHITE	BLACK	BLACK	
R4-7b	24"	30"	KEEP	HIC	HWA "STAN GHWAY SIGN TION"; AS AI	NS,	WHITE	BLACK	BLACK	
R11-2	48"	30"	ROAD				WHITE	BLACK	BLACK	
R11-4	60"	30"	ROAD CLOSED TO THRU TRAFFIC				WHITE	BLACK	BLACK	
W1-4L	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	
W1-4R	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	
W5-1	36"	36"	ROAD				FLUOR- ESCENT ORANGE	BLACK	BLACK	
W8-1	36"	36"	BUMP				FLUOR- ESCENT ORANGE	BLACK	BLACK	
W8-3	36"	36"	PAVEMENT				FLUOR- ESCENT ORANGE	BLACK	BLACK	
W8-8	36"	36"	ROUGH				FLUOR- ESCENT ORANGE	BLACK	BLACK	
W8-9	36"	36"	SHOULDER				FLUOR- ESCENT ORANGE	BLACK	BLACK	
W8-15	36"	36"	GROOVED PAVEMENT		V		FLUOR- ESCENT ORANGE	BLACK	BLACK	
W16-8P(1)	24"	8"	Montello St	4"B	2"	N/A	FLUOR- ESCENT ORANGE	BLACK	BLACK	
W20-1c	36"	36"	ROAD WORK AHEAD	HIC	HWA "STAN GHWAY SIGN TION"; AS AI	NS,	FLUOR- ESCENT ORANGE	BLACK	BLACK	
W20-2c	36"	36"	DETOUR				FLUOR- ESCENT ORANGE	BLACK	BLACK	
W20-3c	36"	36"	ROAD CLOSED AHEAD				FLUOR- ESCENT ORANGE	BLACK	BLACK	
W20-4c	36"	36"	ONE LANE ROAD AHEAD				FLUOR- ESCENT ORANGE	BLACK	BLACK	

IDENTIFI-	SIZE C	F SIGN	TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
CATION NUMBER	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK- GROUND	LEGEND	BORDER
MA-W20-7b	36"	36"	POLICE OFFICER AHEAD	AS PER MASSDOT STANDARD			FLUOR- ESCENT ORANGE	BLACK	BLACK
W21-7	36"	36"	UTILITY WORK AHEAD	SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED		FLUOR- ESCENT ORANGE	BLACK	BLACK	
M4-8a	24"	18"	END DETOUR				FLUOR- ESCENT ORANGE	BLACK	BLACK
M4-9L	30"	24"	DETOUR				FLUOR- ESCENT ORANGE	BLACK	BLACK
M4-9V	30"	24"	DETOUR				FLUOR- ESCENT ORANGE	BLACK	BLACK

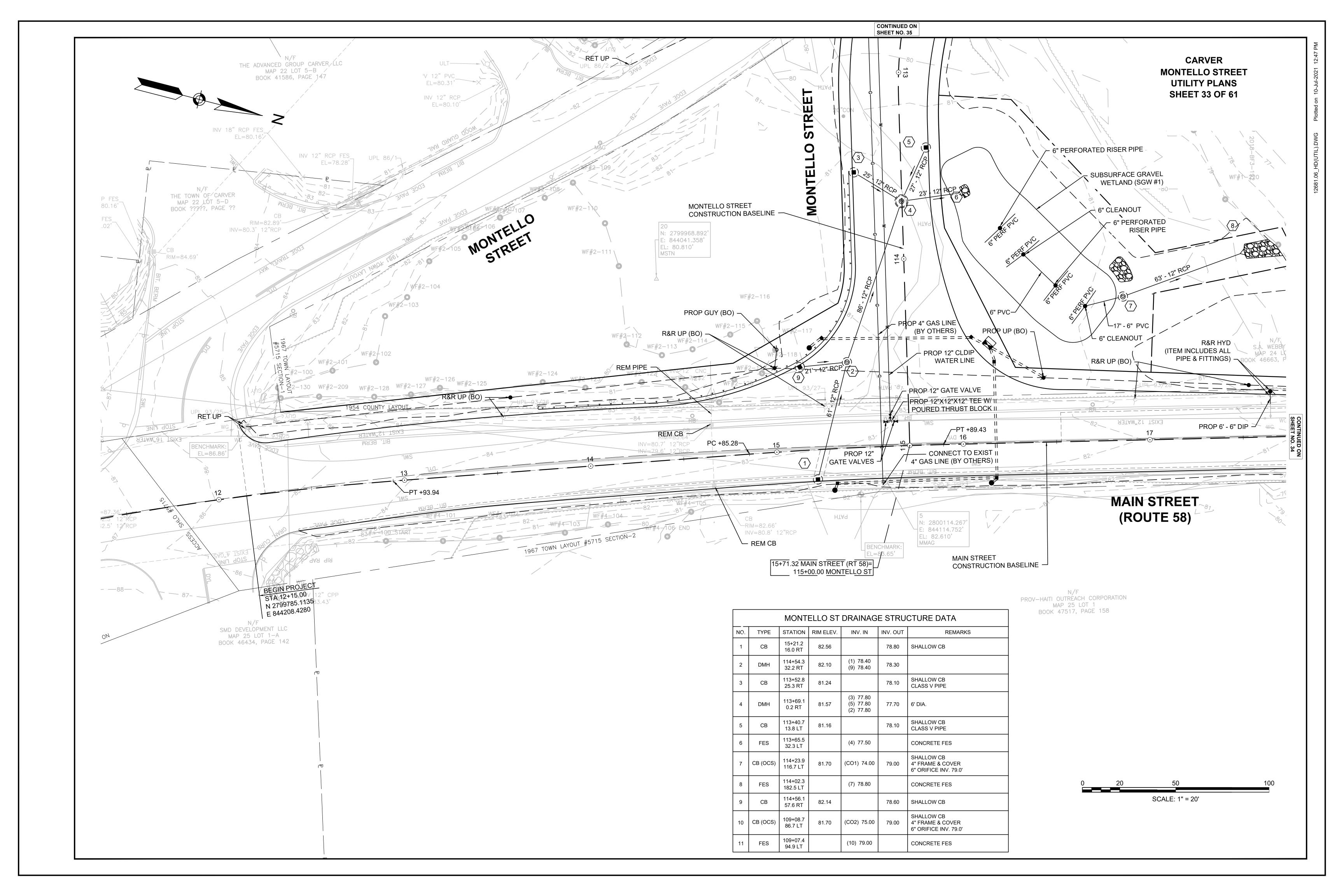
TEMPORARY TRAFFIC CONTROL SIGN SUMMARY

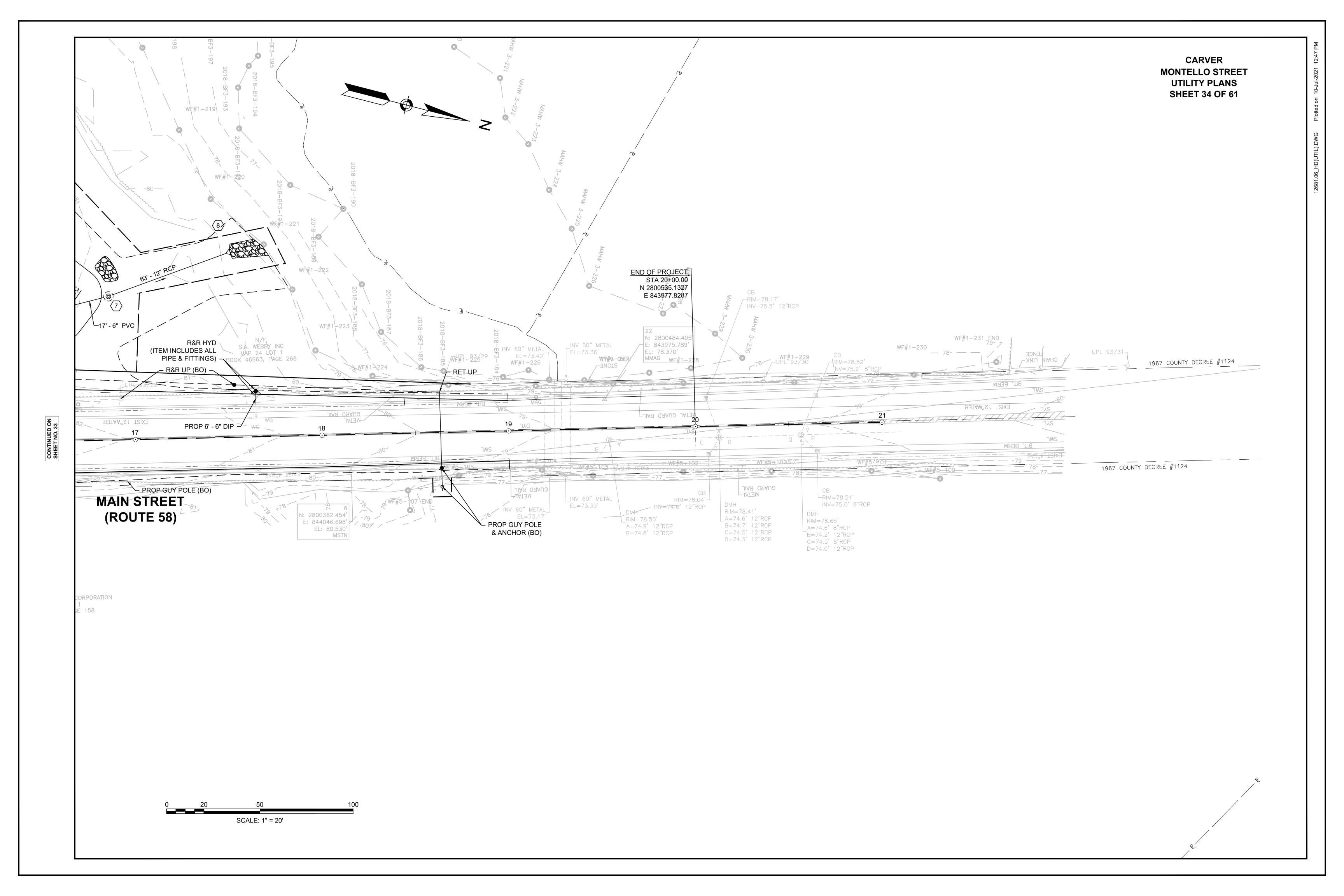
NOTES:

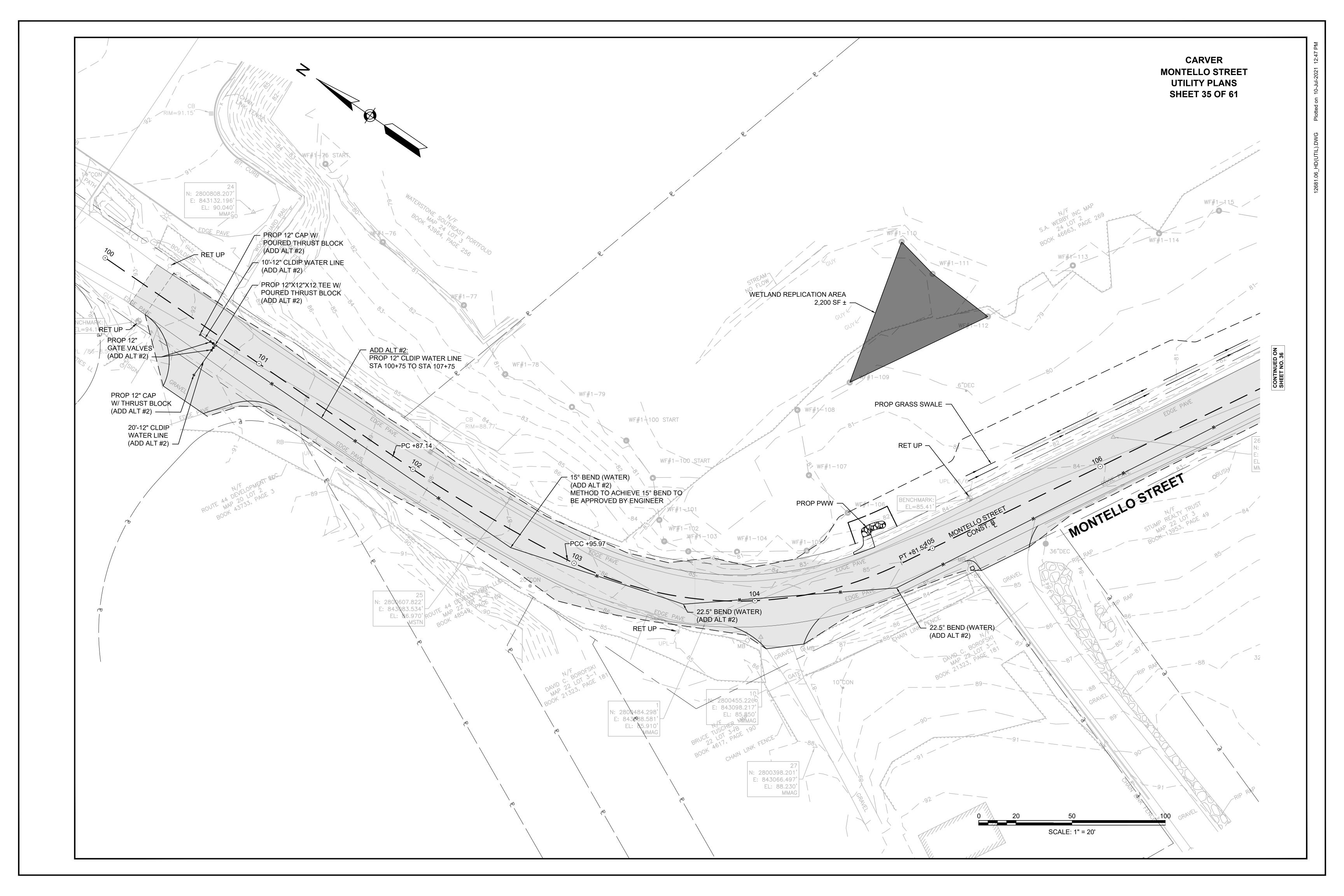
1. HIGH INTENSITY REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION" FOR TEXT DIMENSIONS, AS AMENDED; THE 1977 MASSHIGHWAY DEPARTMENT CONSTRUCTION AND TRAFFIC STANDARD DETAILS, AS AMENDED, FOR SIGNS AND SUPPORTS; THE MASSHIGHWAY DEPARTMENT SIGN LISTINGS 1993 EDITION, AS AMENDED; THE 2009 MANUAL ON UNIFORM

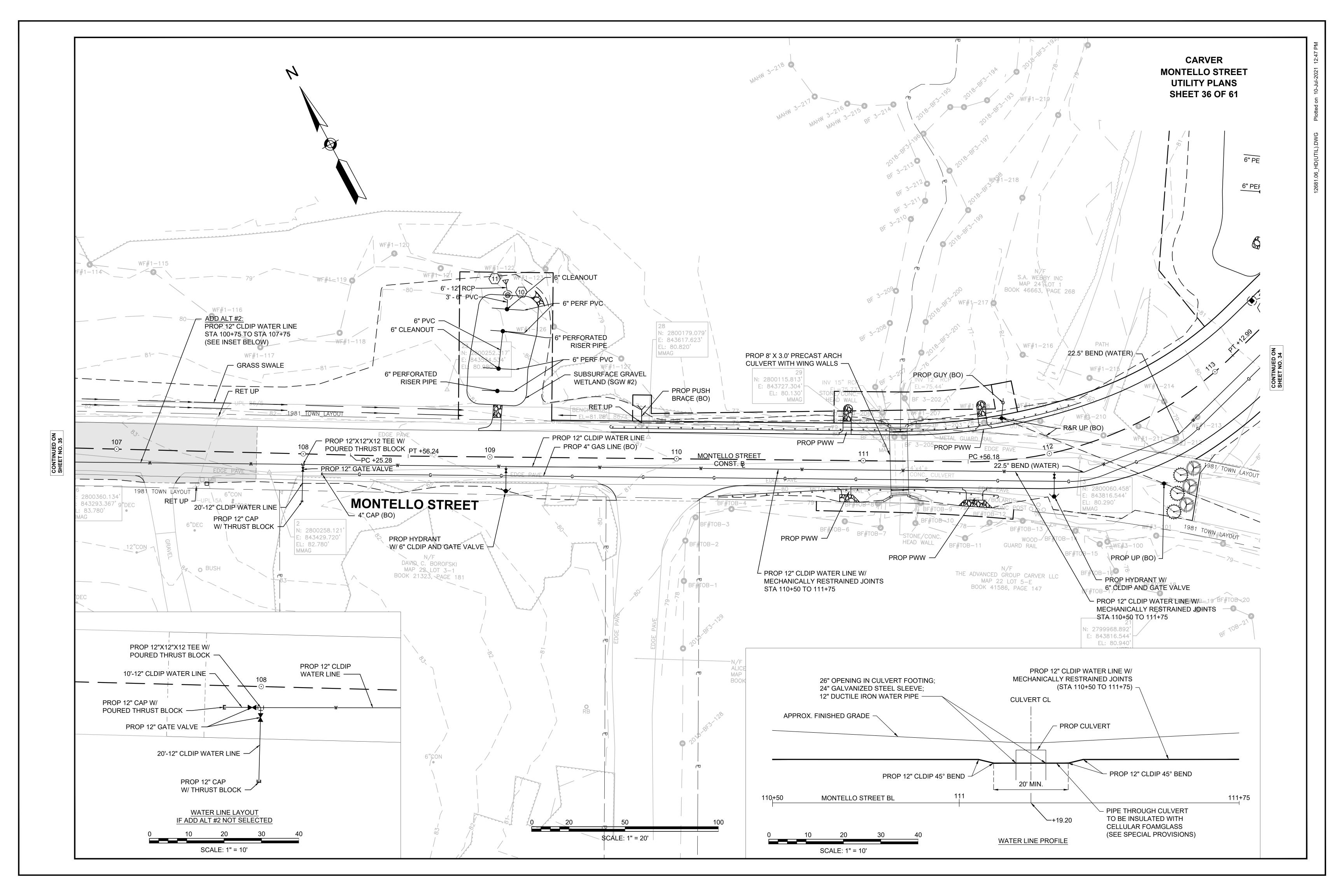
TRAFFIC CONTROL DEVICES FOR MOUNTING REQUIREMENTS; AND THE 2017 MassDOT STANDARD SIGNS BOOK, AS AMENDED.

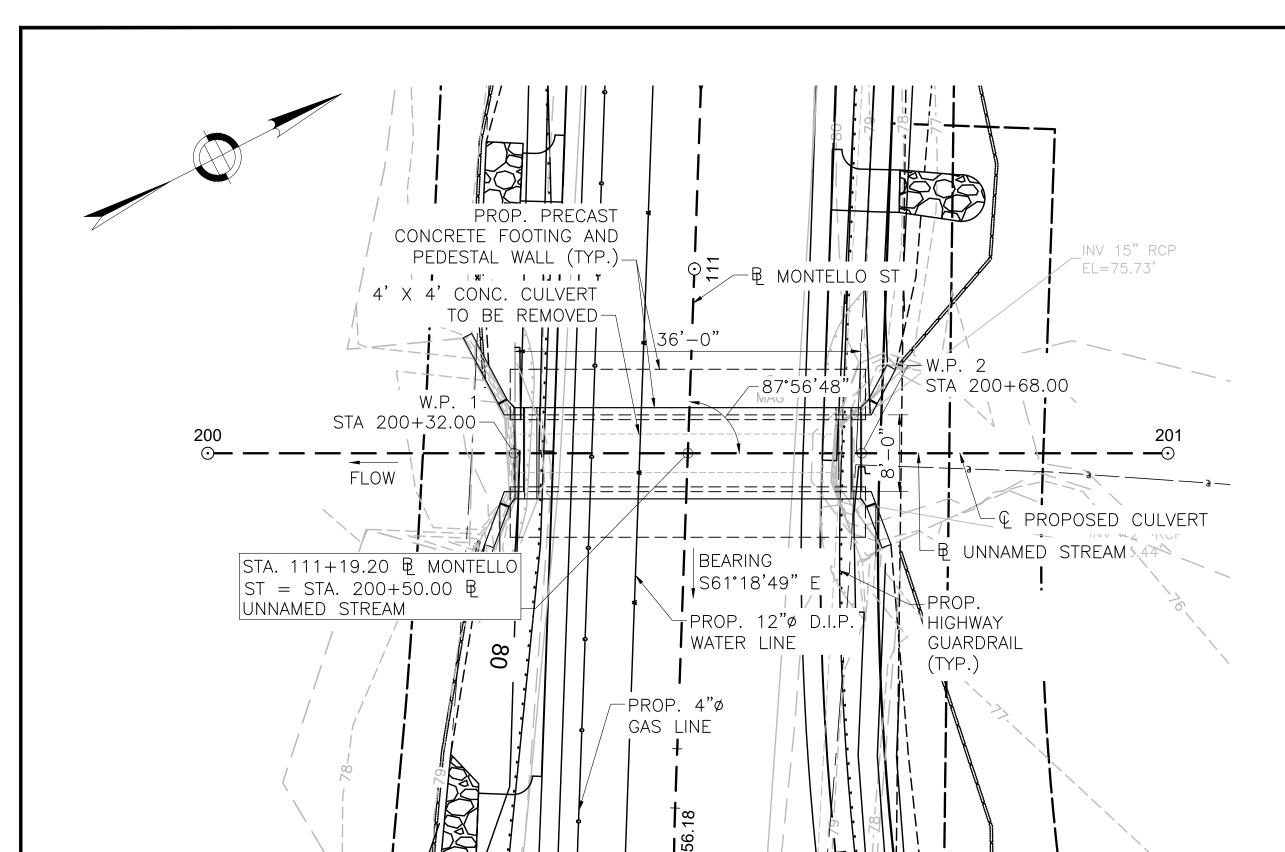
2. ALL SIGNS SHOWN GRAPHICALLY FOR INFORMATION ONLY. SIGN VENDOR SHALL FABRICATE ALL SIGNS IN ACCORDANCE WITH THE APPLICABLE STANDARDS.



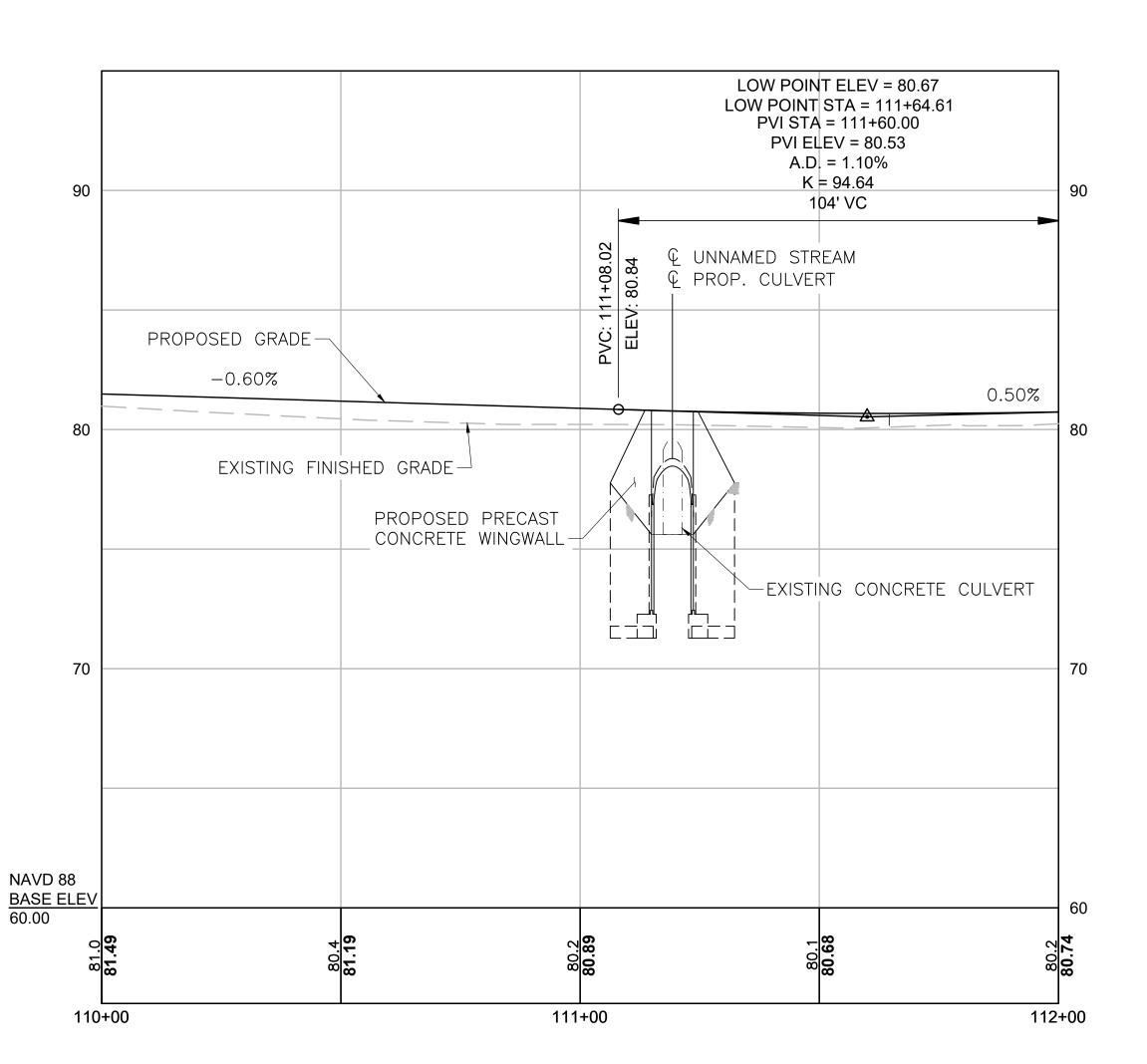




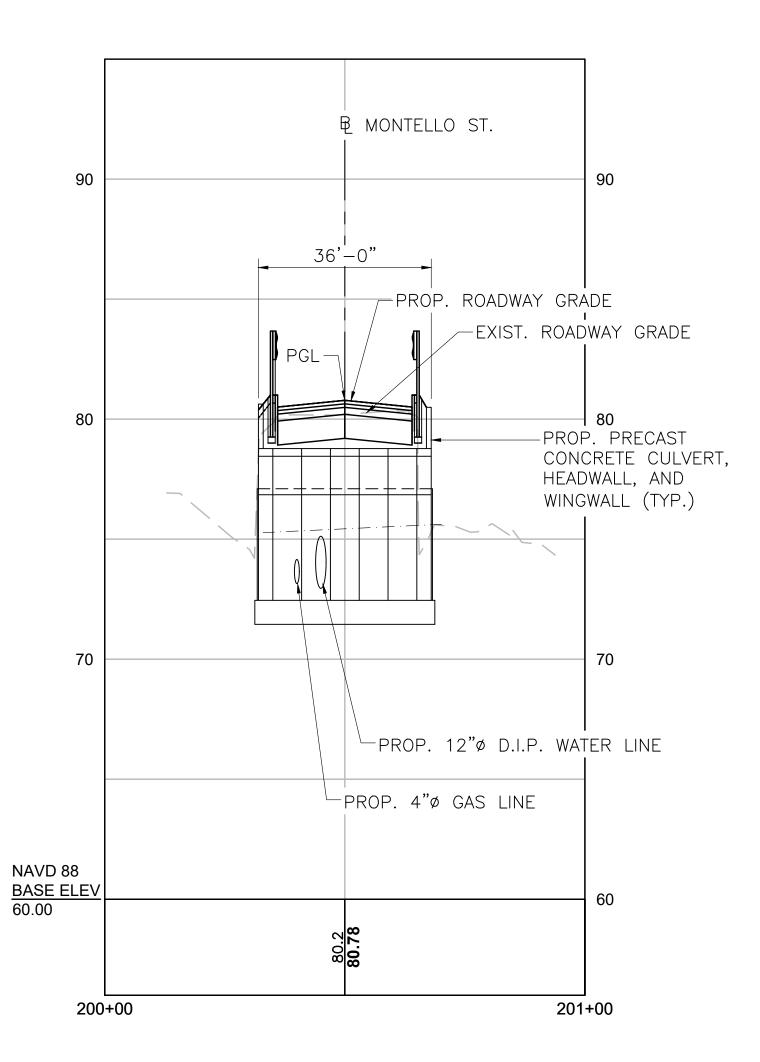




SCALE: 1" = 10'-0"



PROFILE - MONTELLO STREET HORIZONTAL SCALE: 1" = 20'-0"VERTICAL SCALE:  $\frac{1}{4}$ " = 1'-0"



PROFILE - UNNAMED STREAM HORIZONTAL SCALE: 1" = 20'-0"VERTICAL SCALE:  $\frac{1}{4}$ " = 1'-0"

#### GENERAL NOTES:

IN ACCORDANCE WITH 2020 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR HL-93 LOADING.

#### **CONCRETE:**

ALL CAST IN PLACE CONCRETE SHALL BE 4000 PSI  $\frac{3}{4}$ ", 610 CEMENT CONCRETE.

**CARVER** 

**MONTELLO STREET** 

STRUCTURAL DETAILS

**SHEET 37 OF 61** 

ALL PRECAST CONCRETE SHALL BE 5000 PSI,  $\frac{3}{4}$ ", 705 CEMENT CONCRETE.

#### **REINFORCEMENT:**

REINFORCING STEEL SHALL BE EPOXY COATED AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M31 GRADE 60.

#### SUBSTRUCTURE DESIGN:

PROPOSED BRIDGE SUBSTRUCTURES INCLUDING FOOTINGS AND PEDESTAL WALLS ARE SHOWN AS PRELIMINARY ONLY. FINAL FOOTING DESIGN BY CULVERT MANUFACTURER. SEE GEOTECH RECOMMENDATIONS.

#### **SURVEY AND EXISTING CONDITIONS:**

THE EXISTING CONDITIONS SHOWN ON THIS PLAN WERE DEVELOPED FROM ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC. BETWEEN JUNE 2020 AND OCTOBER 2020. THE HORIZONTAL CONTROL IS BASED ON THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM AND THE NATIONAL GEODETIC SURVEY (NAD83). ALL ELEVATION IS US FEET, REFERENCED TO THE NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD88).

#### DEMOLITION AND CONSTRUCTION:

ALL EXISTING MATERIALS REMOVED AND NOT REUSED AND ALL WASTE MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. CONTAMINATED WASTE SHALL BE DISPOSED OF OFF SITE AT AN APPROVED FACILITY.

ALL UNSUITABLE MATERIALS SHALL BE REMOVED WITHIN THE LIMITS OF THE FOUNDATIONS OF THE STRUCTURE, AS DIRECTED BY THE RESIDENT ENGINEER. BACKFILL WITH GRAVEL BORROW FOR BRIDGE FOUNDATIONS.

BURIED EXISTING BRIDGE COMPONENTS MAY BE ENCOUNTERED DURING EXCAVATION AND SHALL BE REMOVED AS UNCLASSIFIED EXCAVATION. TEMPORARY SHEETING MAY BE REQUIRED AT THE OPTION OF THE CONTRACTOR.

BACKFILL AROUND PROPOSED SUBSTRUCTURE SHALL BE GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES. THE CONTRACTOR SHALL TAKE THE PROPER PRECAUTIONS TO ENSURE

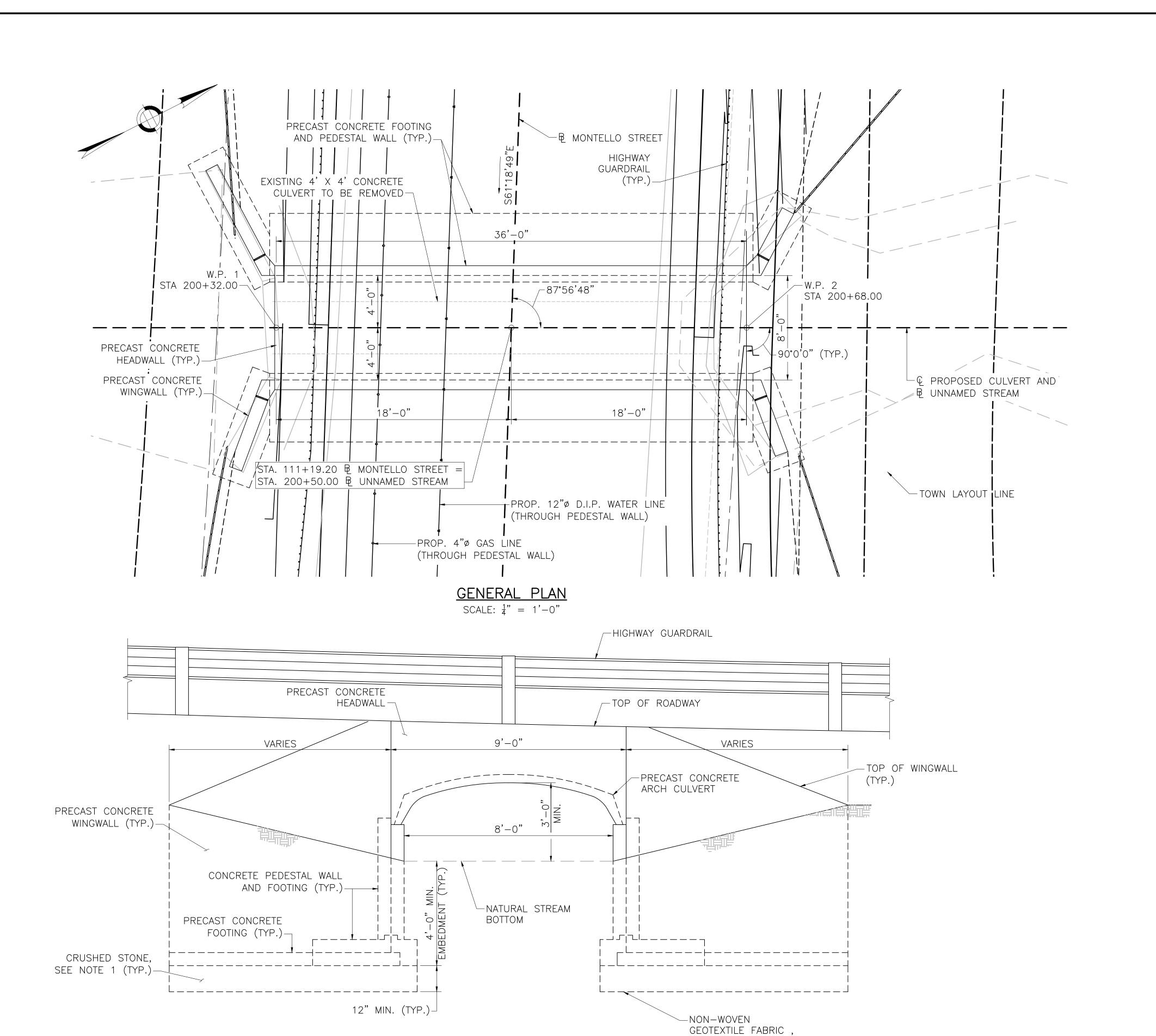
THE STABILITY AND SAFE PERFORMANCE OF ALL STRUCTURAL

ELEMENTS DURING DEMOLITION AND CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ADEQUATE SHIELDING DURING DEMOLITION AND CONSTRUCTION TO ADEQUATELY

PROTECT WORKERS.

ANY DAMAGE TO REMAINING EXISTING COMPONENTS THAT IS CAUSED BY THE CONTRACTOR'S ACTIVITY SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR, AT NO ADDITIONAL EXPENSE.

CARVER
MONTELLO STREET
STRUCTURAL DETAILS
SHEET 38 OF 61



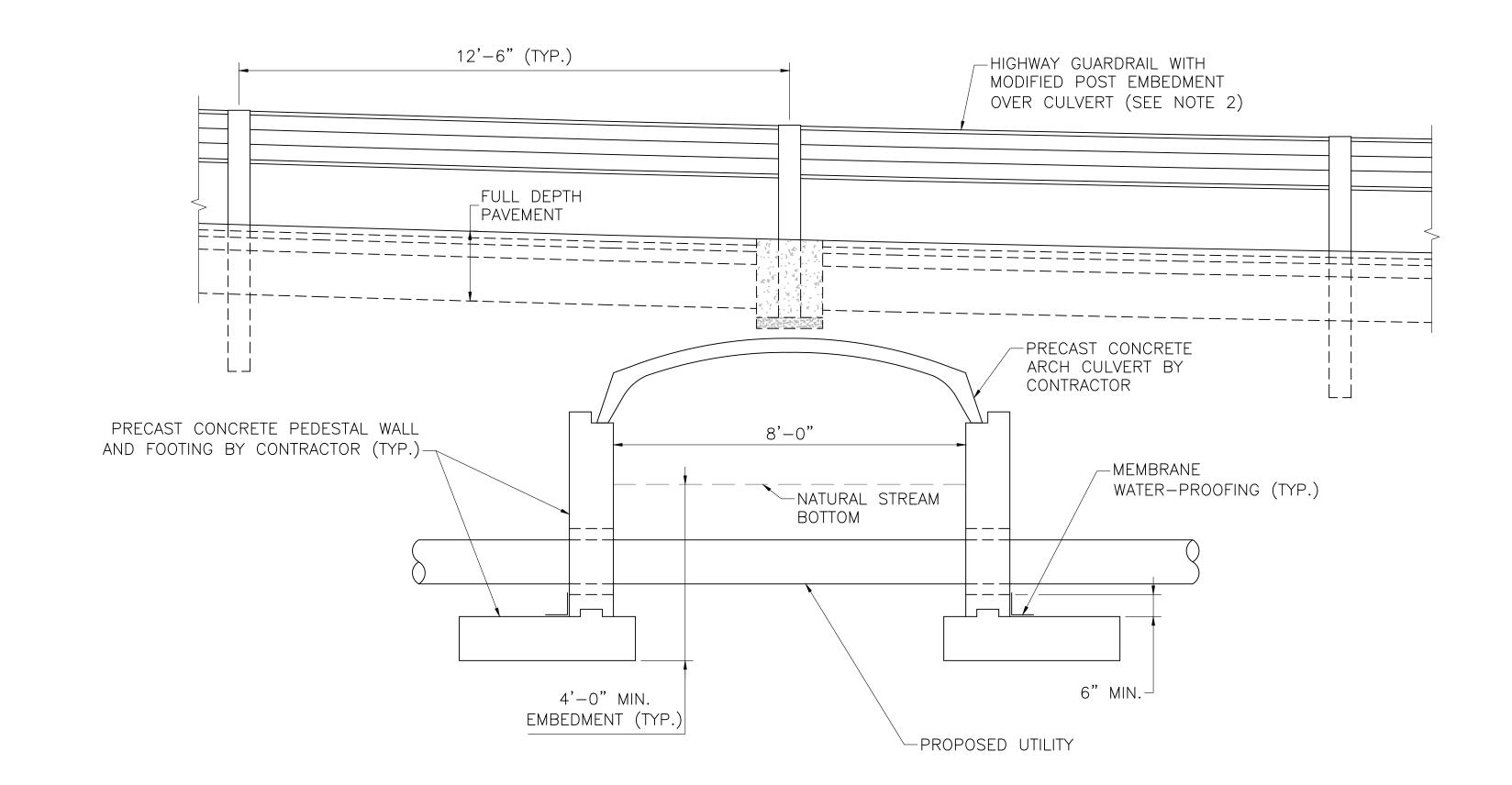
NOTES:

1. PER GEOTECHNICAL MEMO DATED FEBRUARY 12, 2021, FOOTING SUBGRADE SHALL BE OVEREXCAVATED BY 12 INCHES. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED AT THE BOTTOM OF EXCAVATION AND BACKFILLED TO THE FOOTING SUBGRADE WITH 1.5" CRUSHED STONE OR LEAN CONCRETE.

 $\frac{\text{TYPICAL ELEVATION}}{\text{SCALE: } \frac{1}{2}" = 1'-0"}$ 

SEE NOTE 1 (TYP.)

# LONGITUDINAL SECTION SCALE: $\frac{1}{4}$ " = 1'-0"



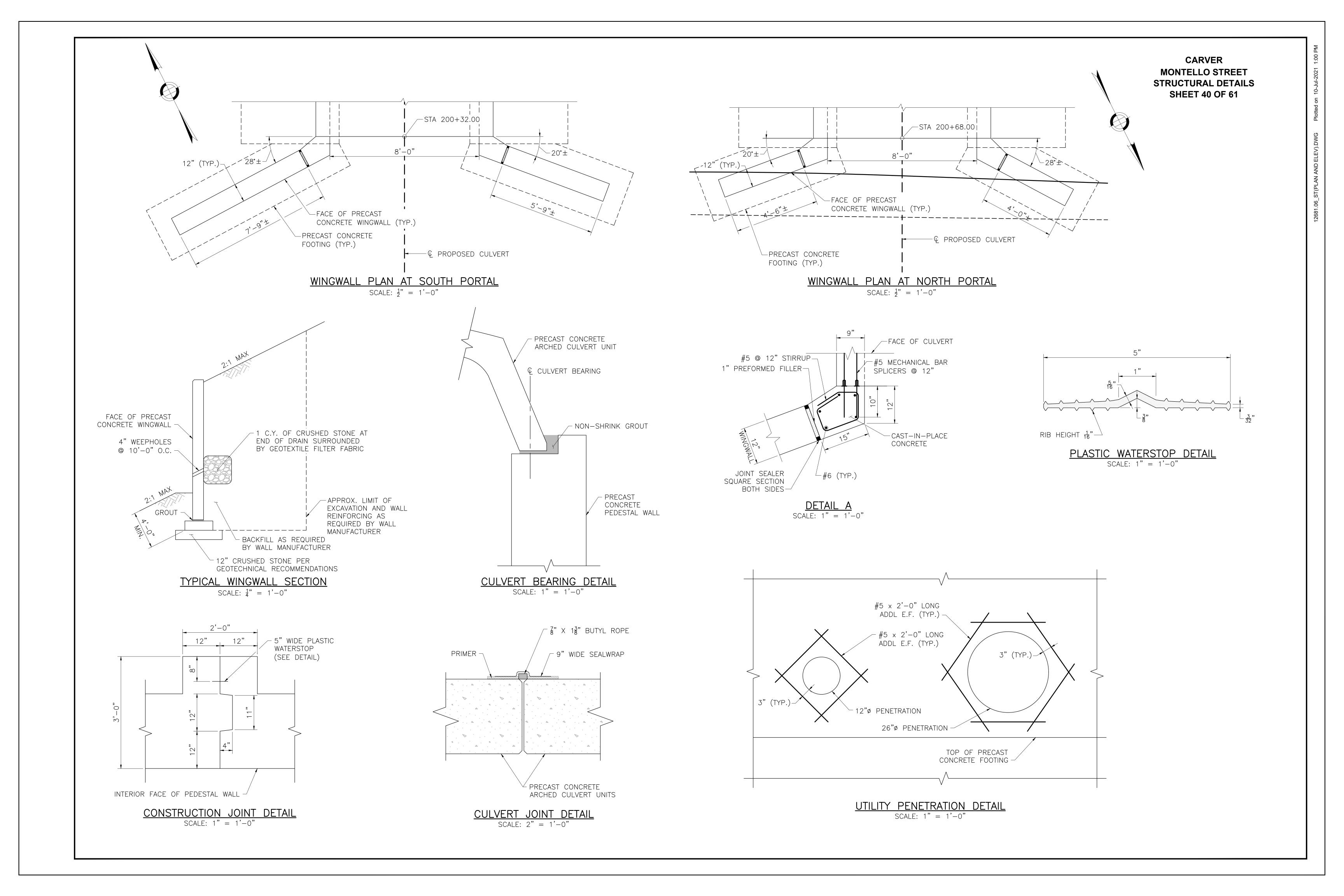
## TRANSVERSE SECTION

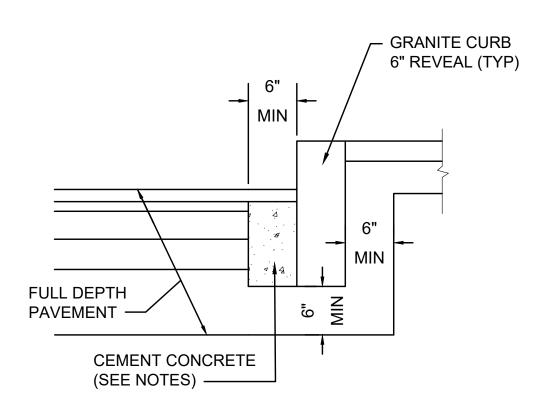
SCALE:  $\frac{1}{2}$ " = 1'-0"

# NOTES:

- PRECAST CONCRETE ARCH CULVERT, PEDESTAL WALLS, AND FOOTINGS TO BE DESIGNED BY CONTRACTOR. ELEVATIONS MAY VARY DEPENDING ON CONTRACTOR DESIGN.
- 2. GUARDRAIL POST SHALL BE MODIFIED IN ACCORDANCE WITH MASSDOT DRAWING NO. 400.5.1 "ENCASED POST FOR SHALLOW MOUNT," DATED OCTOBER 2017.
- 3. THE FACTORED BEARING PRESSURE SHALL BE DETERMINED BY THE CONTRACTOR PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THE FACTORED BEARING RESISTANCE SHALL BE CALCULATED AS A FUNCTION OF THE WIDTH OF THE FOOTING AS DESCRIBED IN THE GEOTECHNICAL MEMORANDUM DATED FEBRUARY 12, 2021 BY SANBORN, HEAD & ASSOCIATES, INC. FACTORED BEARING RESISTANCE IS THE PRODUCT OF THE NOMINAL BEARING RESISTANCE AND A RESISTANCE FACTOR OF 0.45.



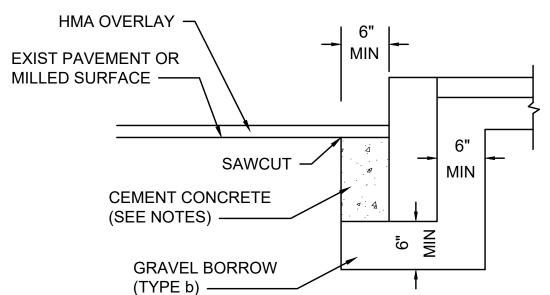


TO BE PLACED IF CURB IS INSTALLED AFTER HOT MIX ASPHALT

- 2. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.
- 3. CEMENT CONCRETE SHALL BE INCLUDED IN THE BID PRICE FOR GRANITE CURB.

#### **GRANITE CURB IN FULL DEPTH PAVEMENT**

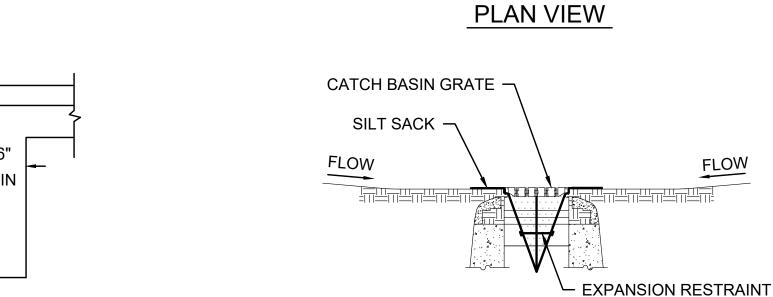
SCALE: N.T.S.



- 1. SAWCUT 6" FROM CURB LINE AND REMOVE EXISTING PAVEMENT AND GRAVEL. REPLACE WITH CEMENT CONCRETE.
- 2. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.
- 3. CEMENT CONCRETE SHALL BE INCLUDED IN THE BID PRICE FOR GRANITE CURB.

#### **GRANITE CURB IN EXISTING PAVEMENT -WITH OVERLAY**

SCALE: N.T.S.



1. INSTALL SILT SACK IN EXISTING CATCH BASINS, BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL BINDER COURSE PAVING IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.

**SECTION VIEW** 

GRATE TO BE PLACED OVER SILT SACK.

CATCH BASIN GRATE ¬

SILT SACK ·

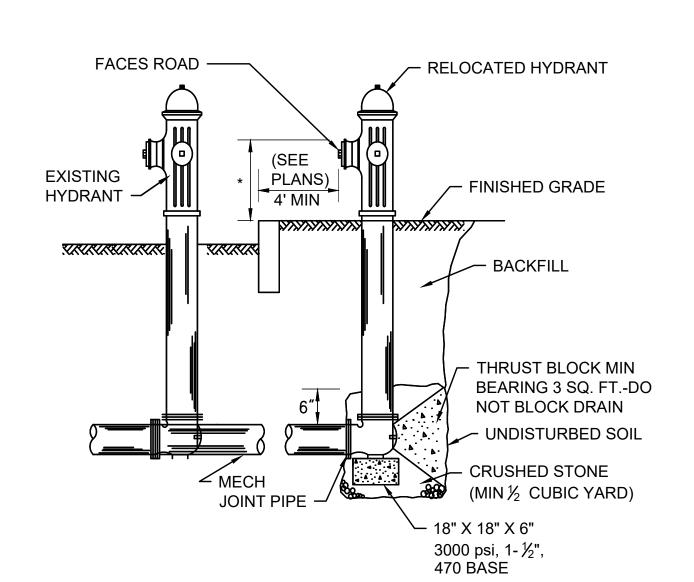
- 1" REBAR FOR **BAG REMOVAL** 

FLOW

SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED

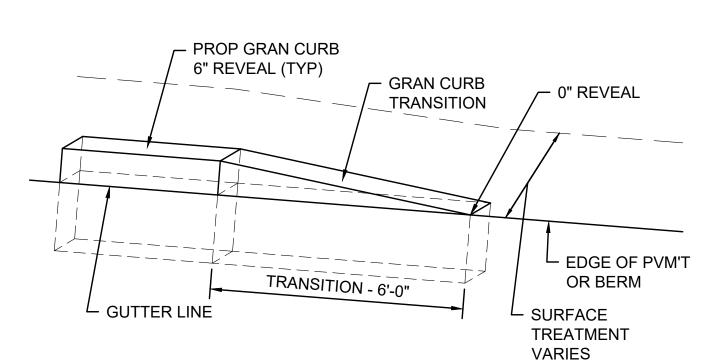
#### **INLET PROTECTION - SILT SACK IN CATCH BASIN**

SCALE: N.T.S.



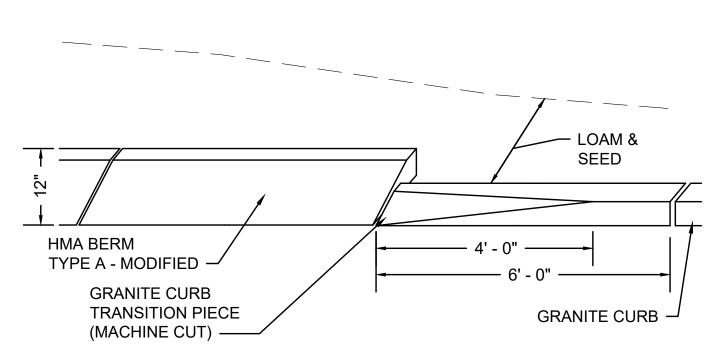
#### **HYDRANT RELOCATION**

SCALE: NTS



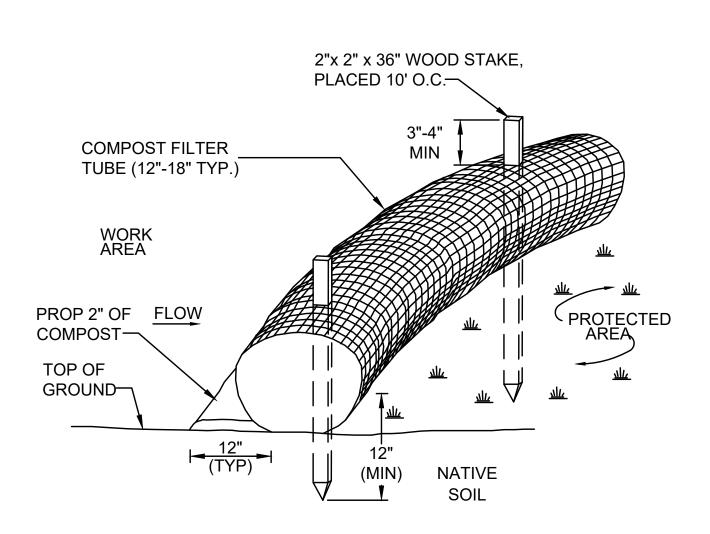
#### **GRANITE CURB TRANSITION PIECE**

SCALE: N.T.S.



#### **GRANITE CURB SPLAYED END**

SCALE: N.T.S.



#### NOTES:

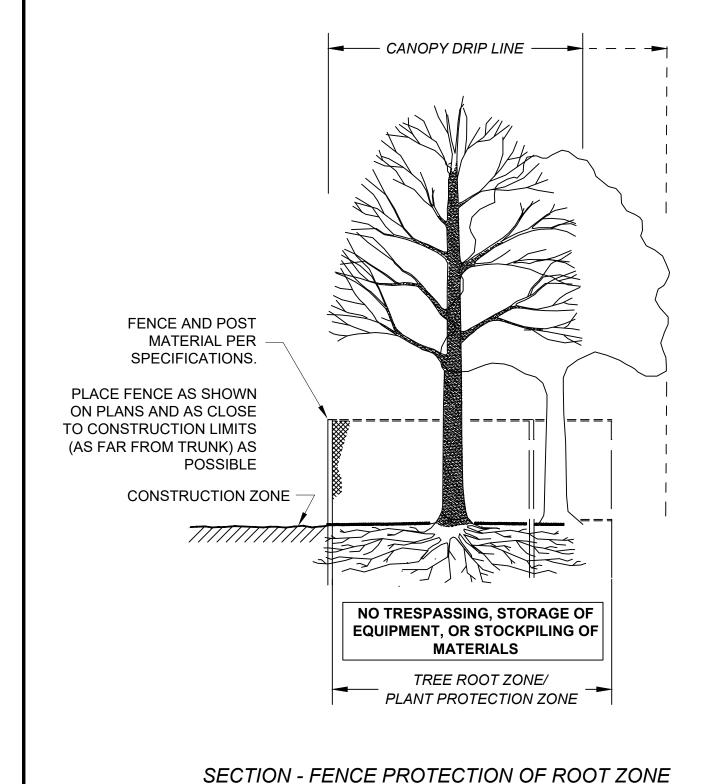
- 1. FILTER TUBE SHALL BE FILLED BY BLOWN IN ORGANIC COMPOST AND PLACED AS ILLUSTRATED ON THE PROJECT PLANS.
- 2. COMPOST FILTER TUBES SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIRED OR REPLACED AS NEEDED
- AT COMPLETION OF PROJECT, COMPOST FILTER TUBES SHALL BE CUT OPEN AND COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS
- 4. THE EMPTY FILTER TUBE FABRIC SHALL BE COLLECTED AND DISPOSED OF PROPERLY.

#### **COMPOST FILTER TUBE**

DETERMINED BY THE ENGINEER.

SCALE: N.T.S.

**CARVER MONTELLO STREET CONSTRUCTION DETAILS SHEET 42 OF 61** 



PLACE FENCE AS SHOWN ON PLANS AND AS CLOSE TO CONSTRUCTION LIMITS (AS FAR FROM TRUNK) AS POSSIBLE EXISTING TREES LIMIT CANOPY/ROOT ZONE NO TRESPASSING, STORAGE OF EQUIPMENT, OR STOCKPILING OF MATERIALS IN ROOT ZONE TREE ROOT ZONE/  $\overline{\phantom{a}}$  PLANT PROTECTION ZONE  $\overline{\phantom{a}}$ 

PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

PRUNE CANOPY AS REQUIRED TO PREVENT DAMAGE FROM CONSTRUCTION EQUIPMENT. ARMOR TREES AS SHOWN ON PLANS REMOVE DEAD/DAMAGED LIMBS OR PER ARBORIST IF AND AS DIRECTED. PRUNING SHALL BE PER ANSI -ARMOR FROM BASE OF A300 STANDARDS TREE, INCLUDING ROOT FLARE, TO FIRST BRANCH. CONSTRUCTION ZONE NO TRESPASSING, STORAGE OF **EQUIPMENT, OR STOCKPILING OF MATERIALS** TREE ROOT ZONE —

SECTION - TRUNK ARMORING & PRUNING

**CONDUIT IN GRASS** 

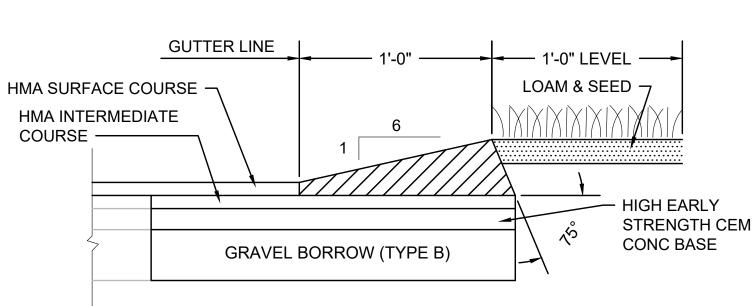
WATERING SAUCER SHALL BE FLOODED TWICE DURING THE FIRST 24 HOURS AFTER PLANTING TREE SHALL BE SET PLUMB DO NOT CUT LEADER 3 INCHES AGED PINE BARK MULCH (PULL MULCH AWAY FROM TRUNK OF TREE) BACKFILL MIX PER SPECIFICATIONS TREE SHALL BE PLANTED SO THAT CROWN IS 3 INCHES ABOVE FINISHED GRADE AFTER - 3 INCH HIGH EARTH WATERING SETTLEMENT -SAUCER AROUND TREE PIT CUT & ROLL BACK 1/3 OF BURLAP BEFORE BACKFILLING. COMPLETELY REMOVE SYNTHETIC BURLAP & LACING 6 INCHES BELOW ROOTBALL ROOTBALL SHALL BE PLACED ON UNDISTURBED SUBGRADE ROOTBALL MIN. 2 X ROOTBALL DIAMETER

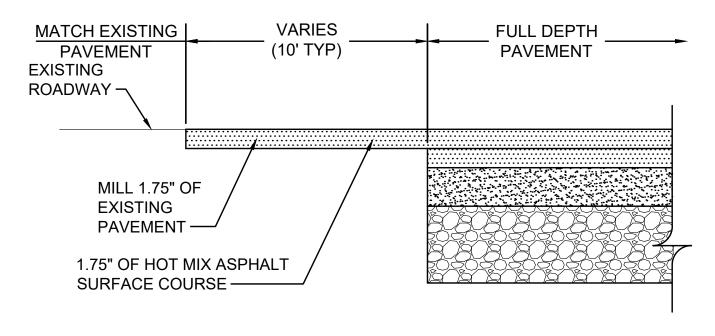
**EVERGREEN TREE PLANTING** 

SCALE: NTS

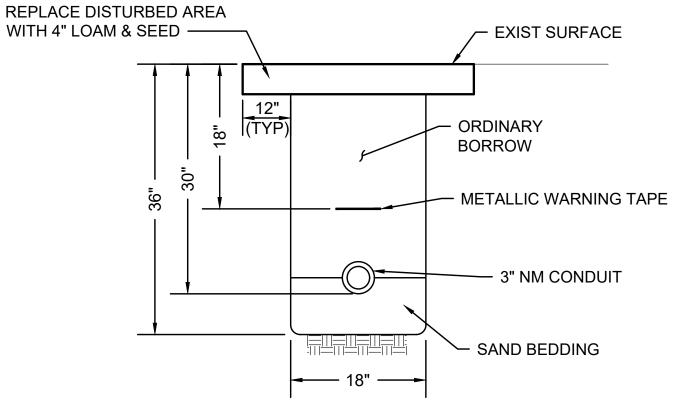
# TREE PROTECTION OF EXISTING TREE(S)

SCALE: NTS



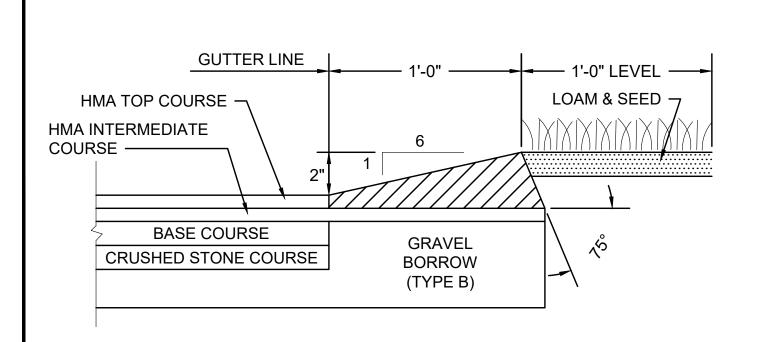


LONGITUDINAL SECTION

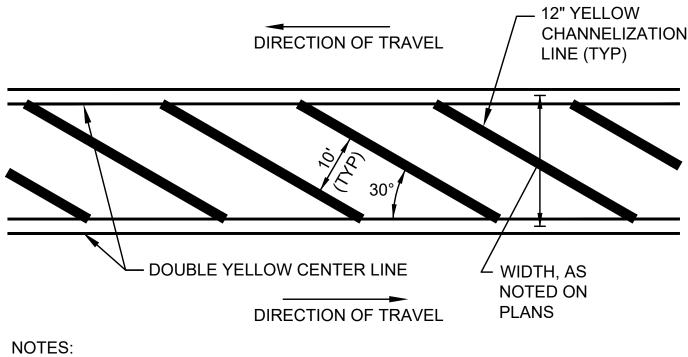


# **HMA BERM TYPE A-MODIFIED AT**

DWG: CURB-12 SCALE: N.T.S.



#### **FULL DEPTH PAVEMENT TRANSITION** SCALE: N.T.S.



# CHANNELIZATION

ALL 12" LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (e.g. TWO - 6" LINES) WILL BE ACCEPTED.

**CHANNELIZED MARKINGS - MEDIAN FOR ROADWAYS 45MPH OR GREATER** SCALE: NTS

# SCALE: N.T.S. PROP FULL DEPTH PAVEMENT - SUITABLE BACKFILL - METALLIC WARNING TAPE - 3" NM CONDUIT ➤ SAND BEDDING

**CONDUIT CROSSING ROADWAY - FULL DEPTH PAVEMENT AREAS** SCALE: N.T.S.

### - MATCH EXISTING HMA PAVEMENT DEPTHS IN 2" LIFTS (4" MIN) 12" (TYP) EXIST SURFACE └─ SAWCUT METALLIC WARNING TAPE - CONTROLLED DENSITY FILL - EXCAVATABLE - 3" NM CONDUIT ➤ SAND BEDDING **└──** 18" <del>──</del>

**CONDUIT CROSSING ROADWAY/DRIVEWAY** SCALE: N.T.S.

# **PAVEMENT WIDENING LESS THAN 4'**

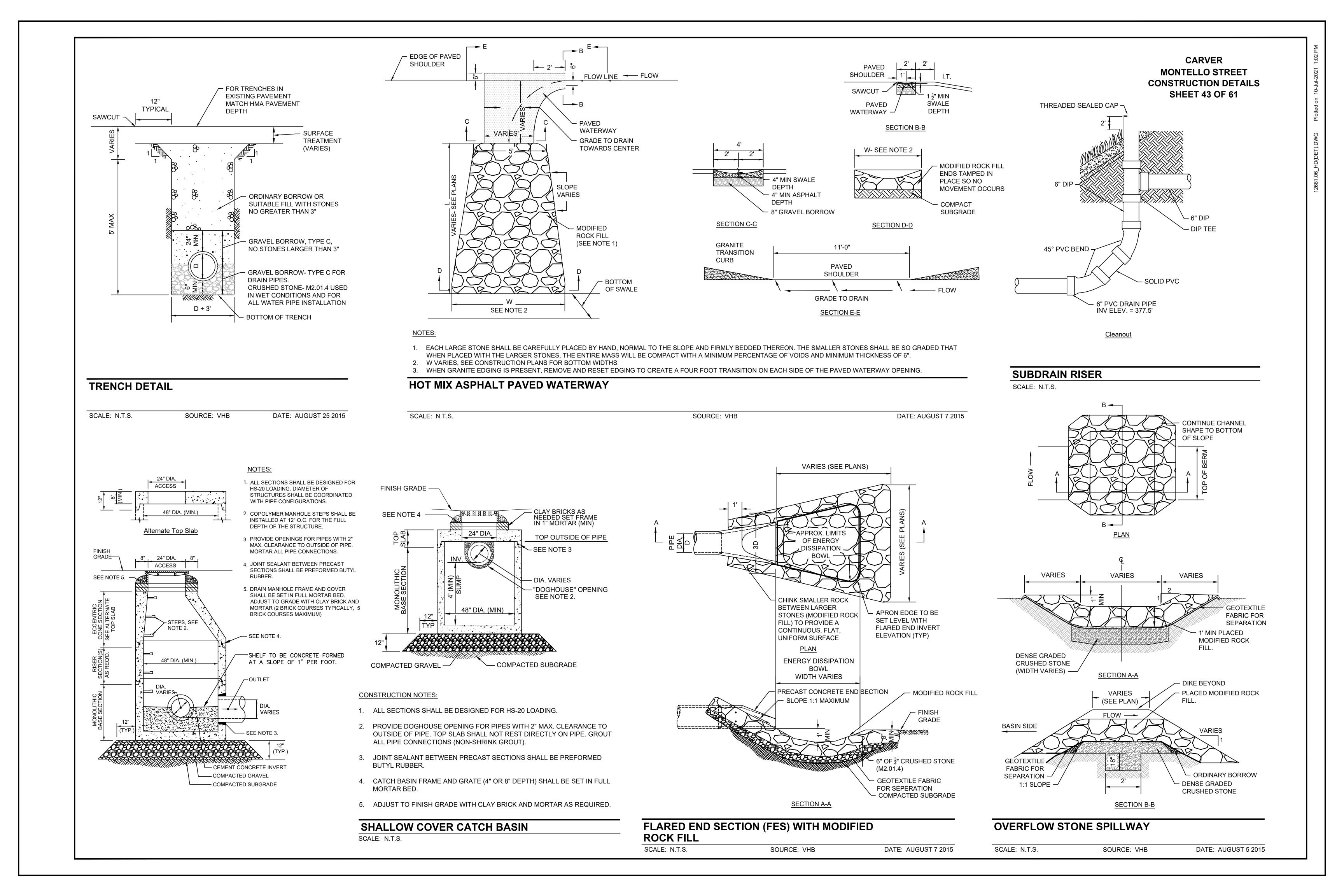
DATE: JAN. 2013

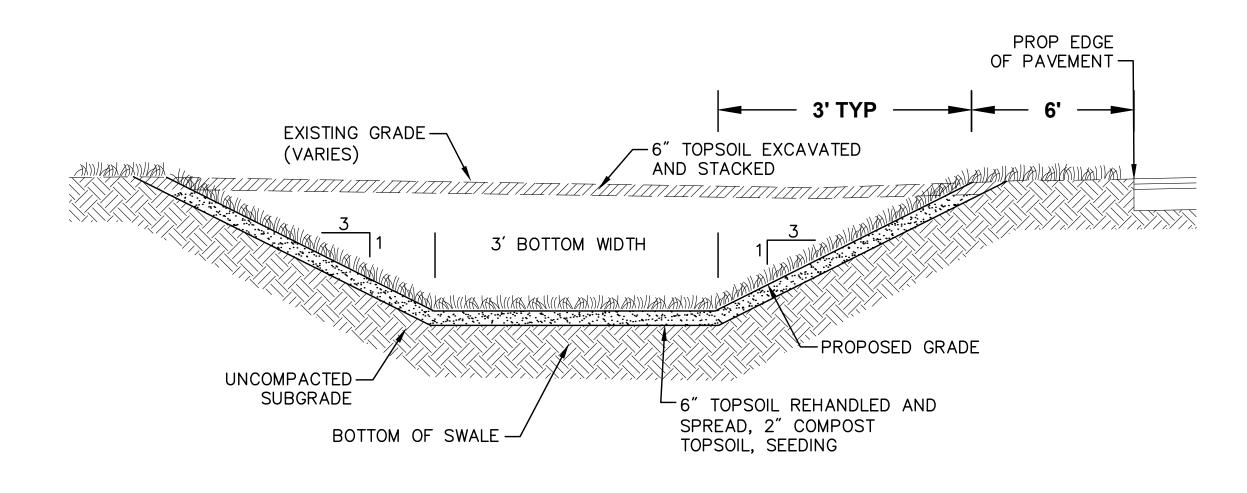
#### **HMA BERM TYPE A-MODIFIED** (USED WITH FULL DEPTH PAVEMENT)

SCALE: N.T.S. DATE: JAN. 2013 DWG: CURB-14

DWG: PM-13

DATE: OCT 2015

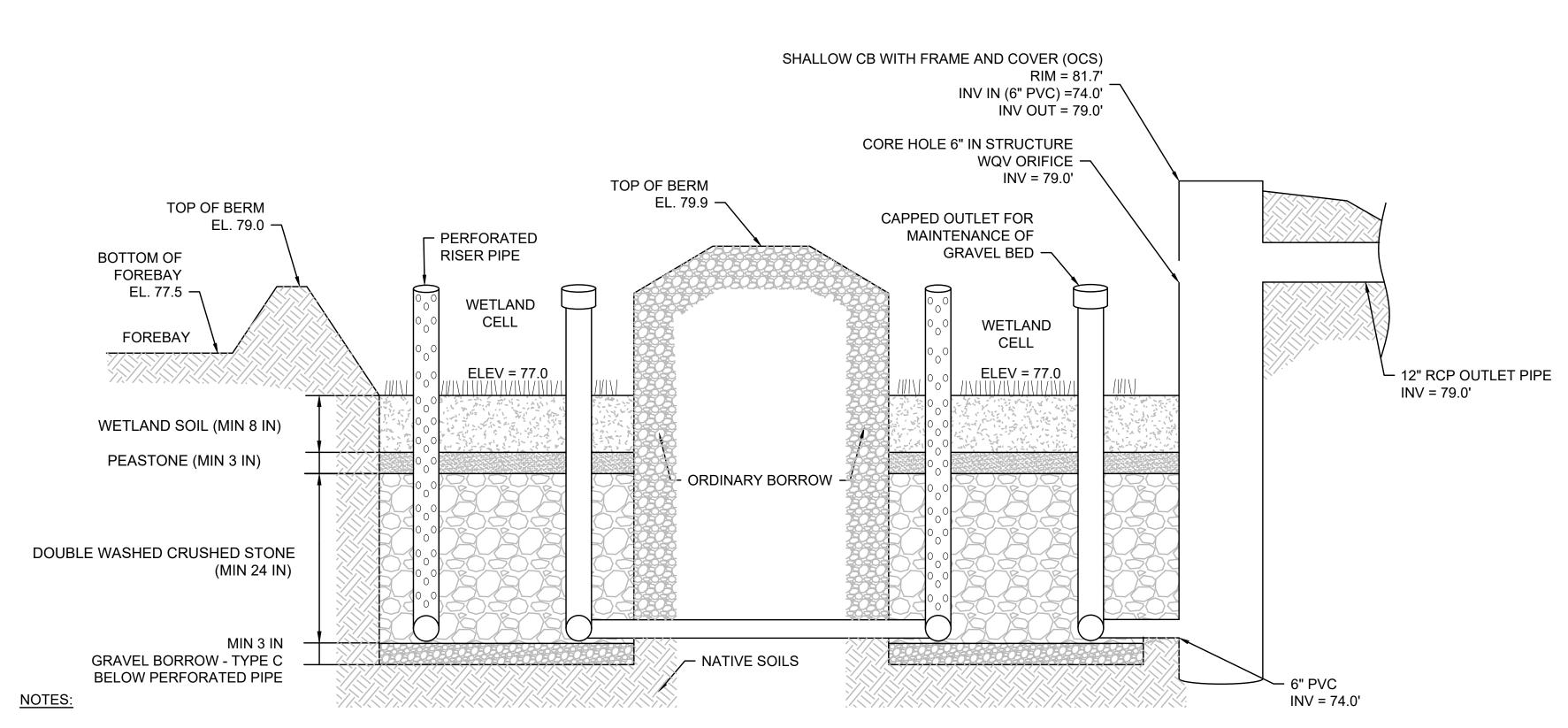




PROP GRASS SWALE DETAIL SCALE: N.T.S.

SOURCE: VHB

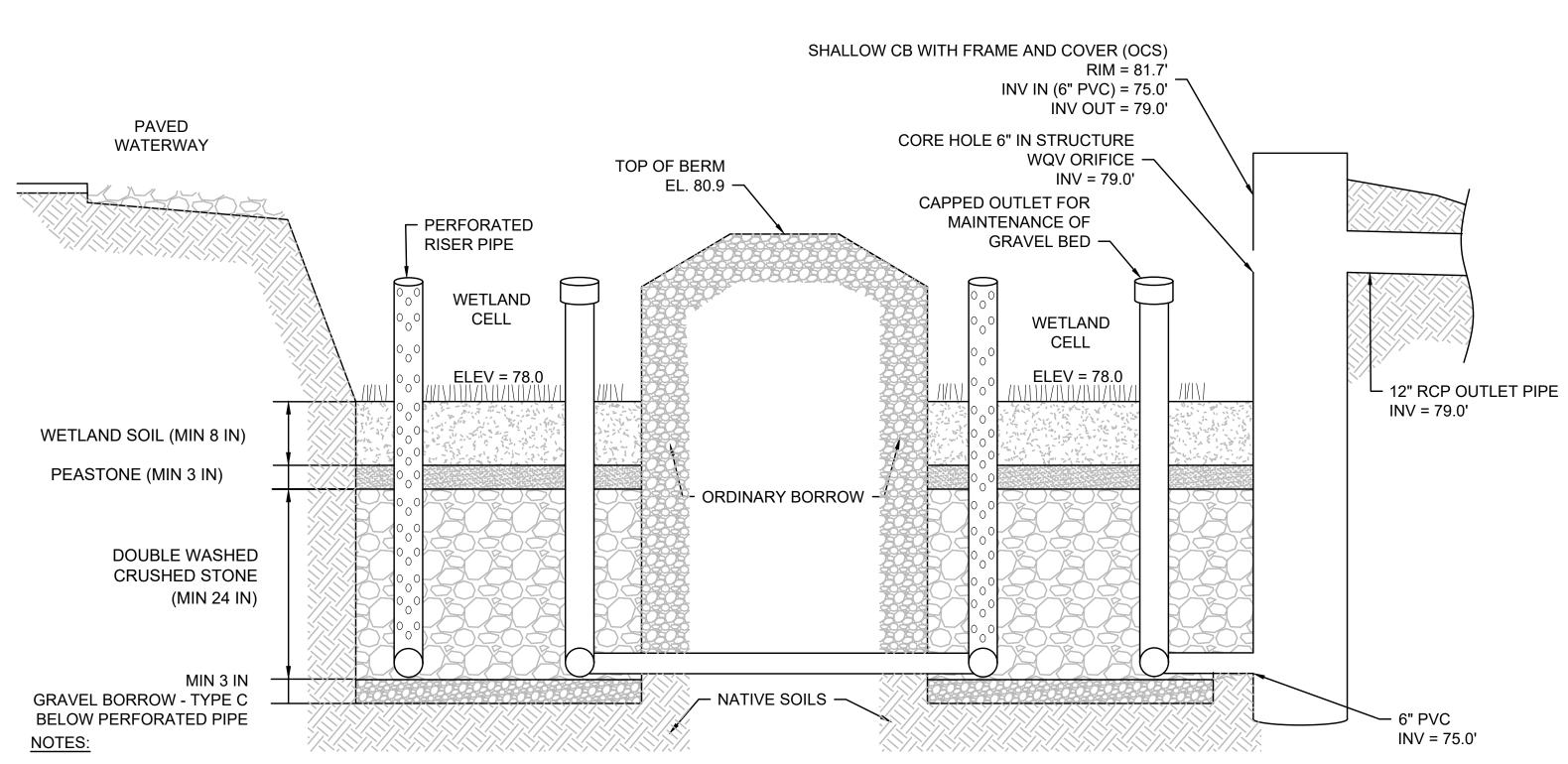
DATE: AUGUST 25 2015



- 1. THE TRANSITION BETWEEN THE PLANTING BED AND THE CRUSHED STONE MAY BE COMPOSED OF SAND, OR WASHED PEA GRAVEL. THE PORTION OF THE PIPE THAT PASSES THROUGH THE WETLAND PLANTING MEDIA AND THROUGH THE BERM BETWEEN THE CELLS MUST BE SOLID.
- 2. REFER TO PLANS FOR OVERFLOW SPILLWAY ELEVATION.

#### **SUBSURFACE GRAVEL WETLAND #1**

SCALE: N.T.S.

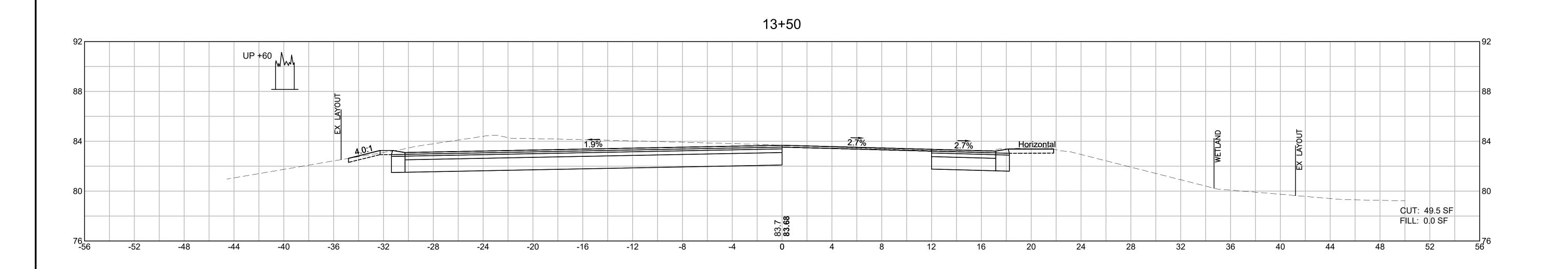


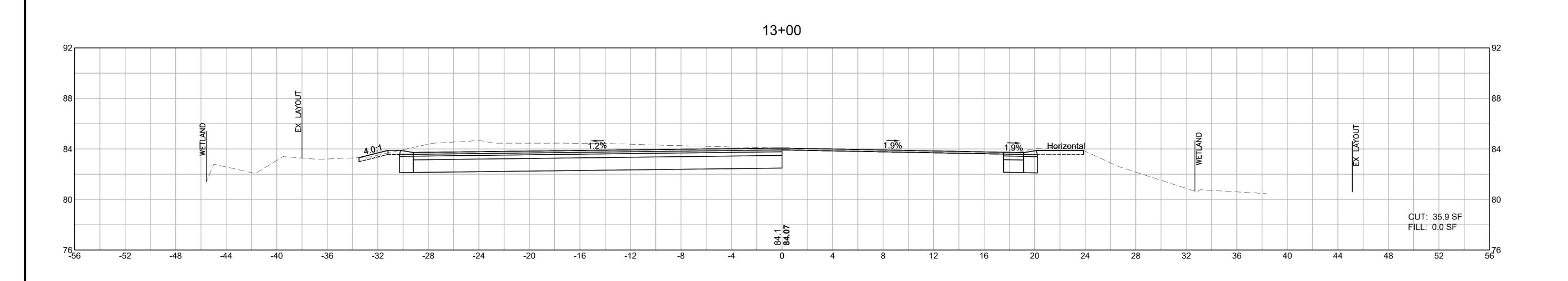
- 1. THE TRANSITION BETWEEN THE PLANTING BED AND THE CRUSHED STONE MAY BE COMPOSED OF SAND, OR WASHED PEA GRAVEL. THE PORTION OF THE PIPE THAT PASSES THROUGH THE WETLAND PLANTING MEDIA AND THROUGH THE BERM BETWEEN THE CELLS MUST BE SOLID.
- 2. REFER TO PLANS FOR OVERFLOW SPILLWAY ELEVATION.

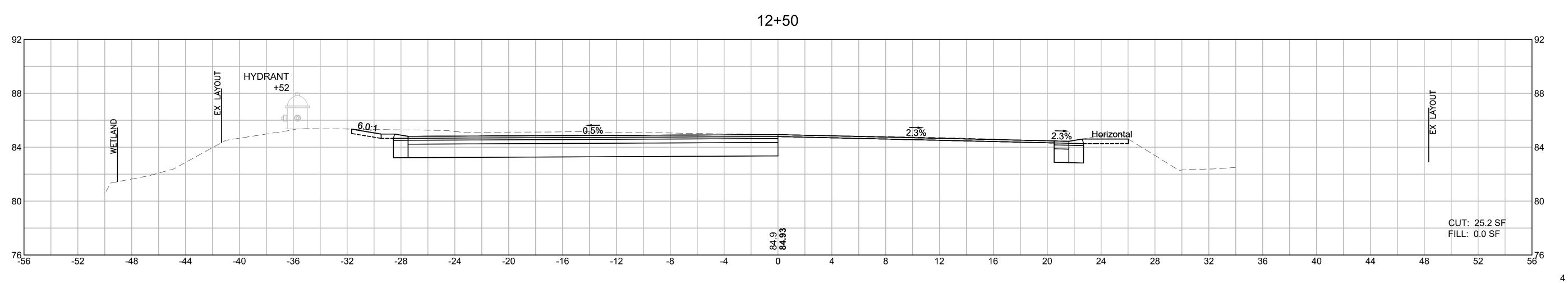
#### **SUBSURFACE GRAVEL WETLAND #2**

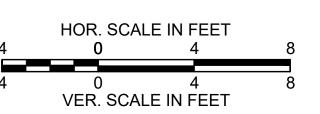
SCALE: N.T.S.

CARVER
MONTELLO STREET
CROSS SECTIONS - MAIN STREET
SHEET 45 OF 61

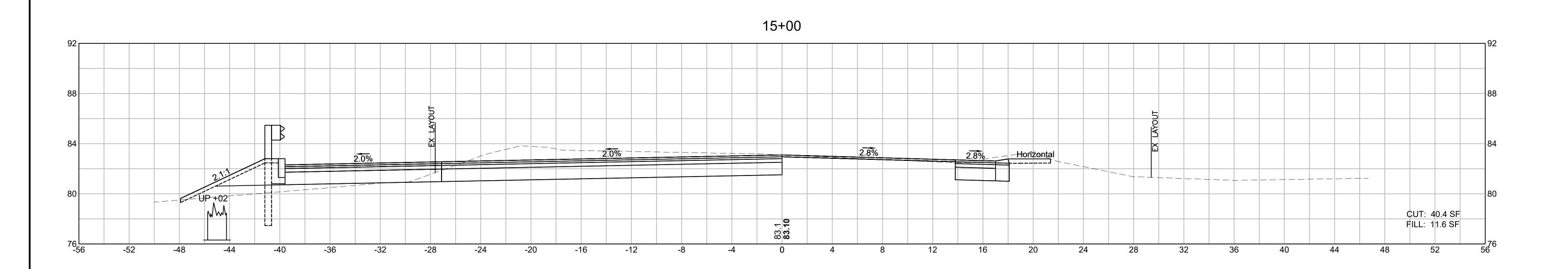


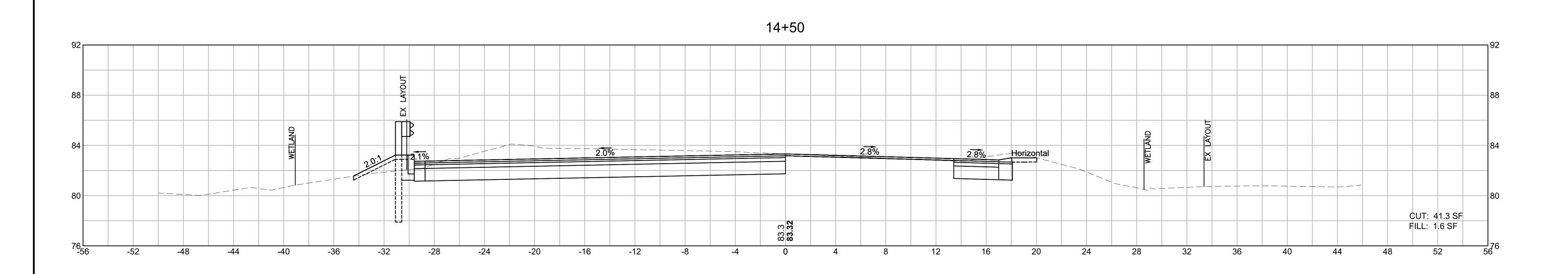


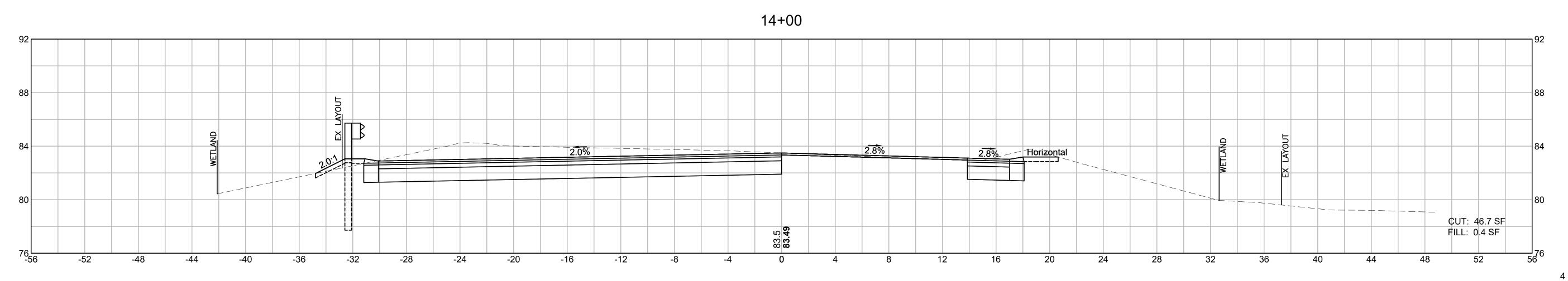


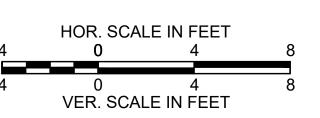


CARVER
MONTELLO STREET
CROSS SECTIONS - MAIN STREET
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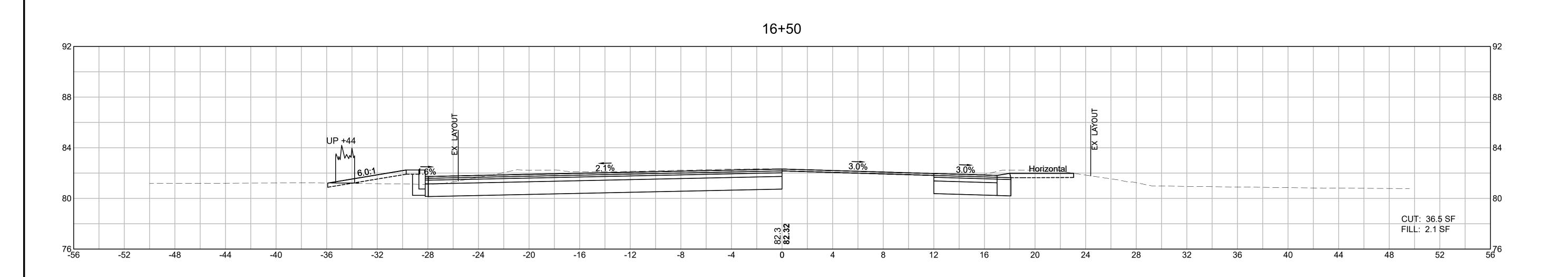


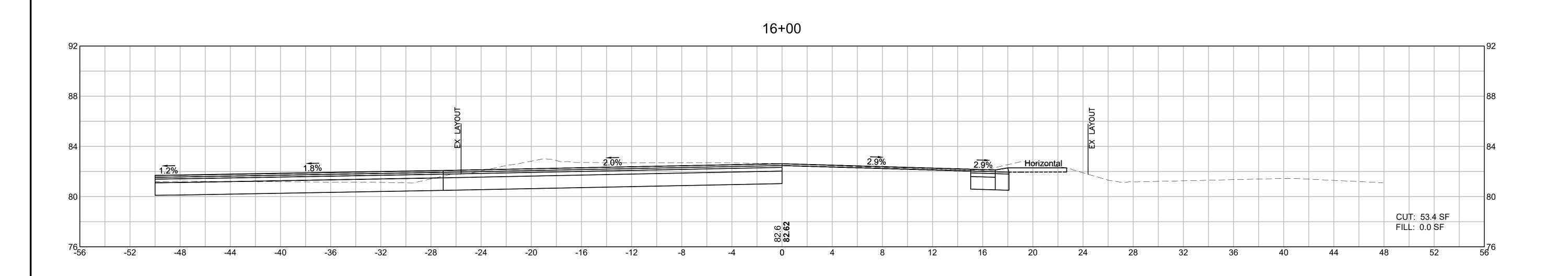


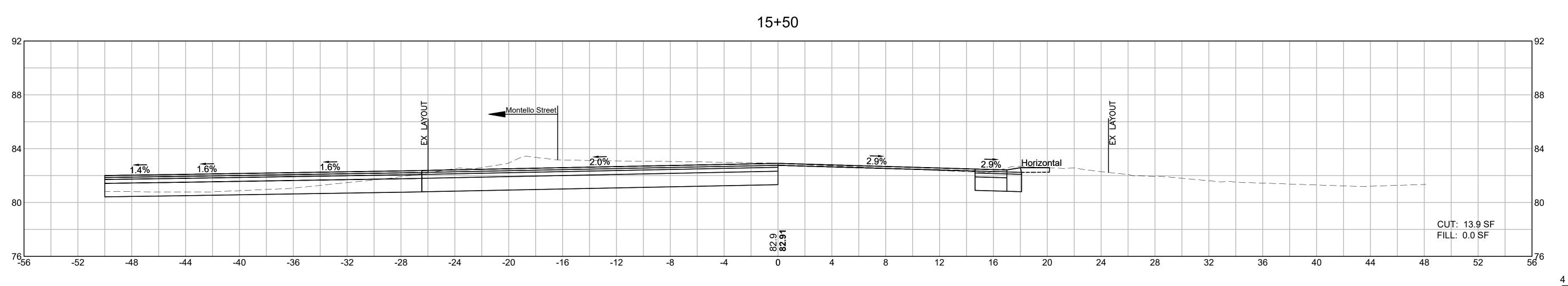


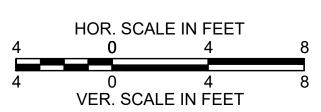


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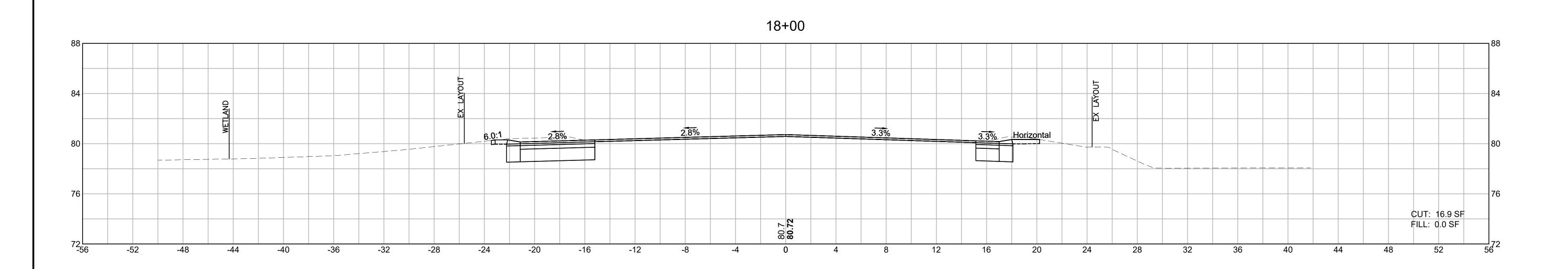


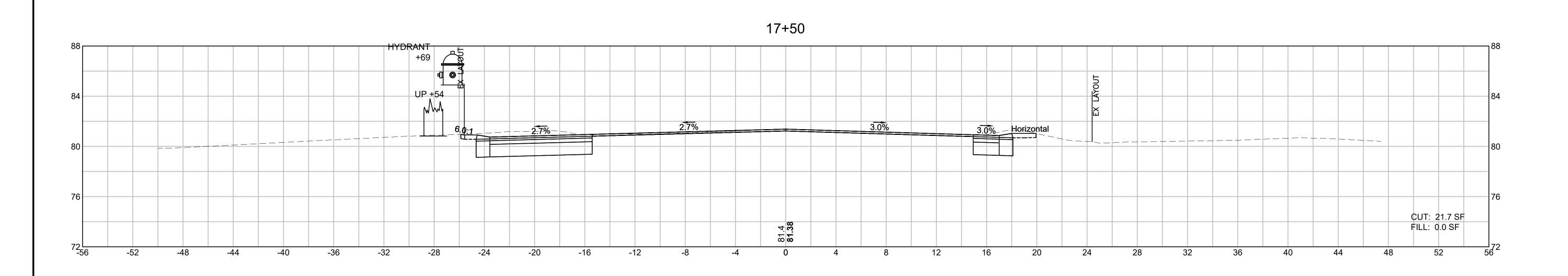


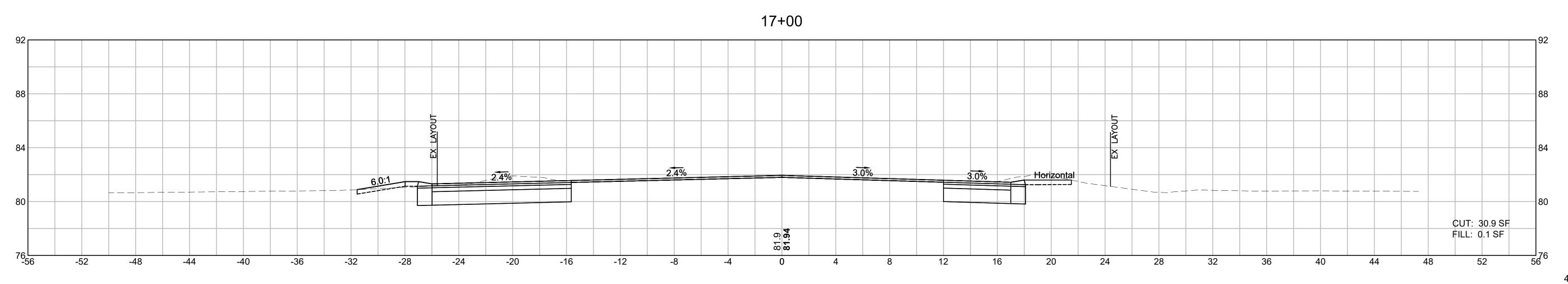


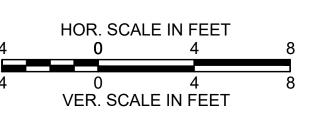


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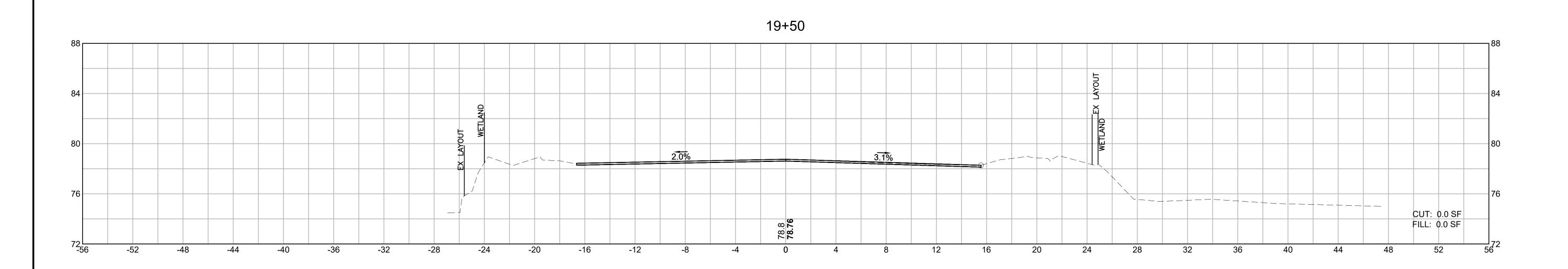


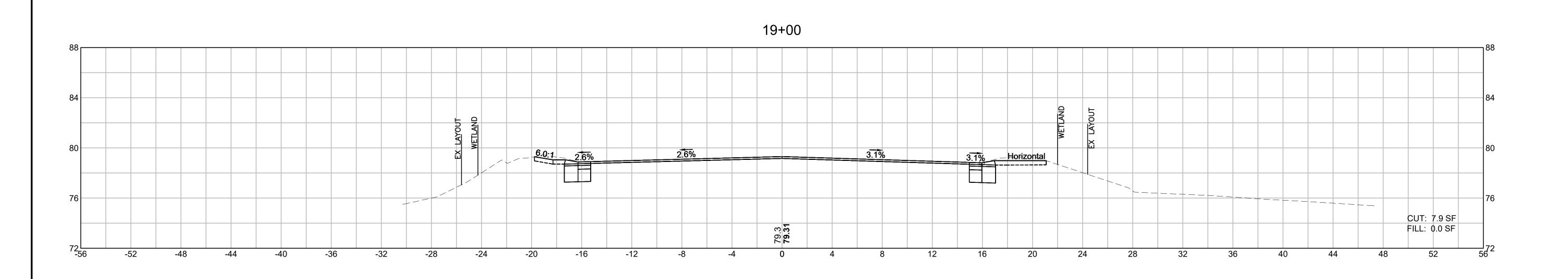


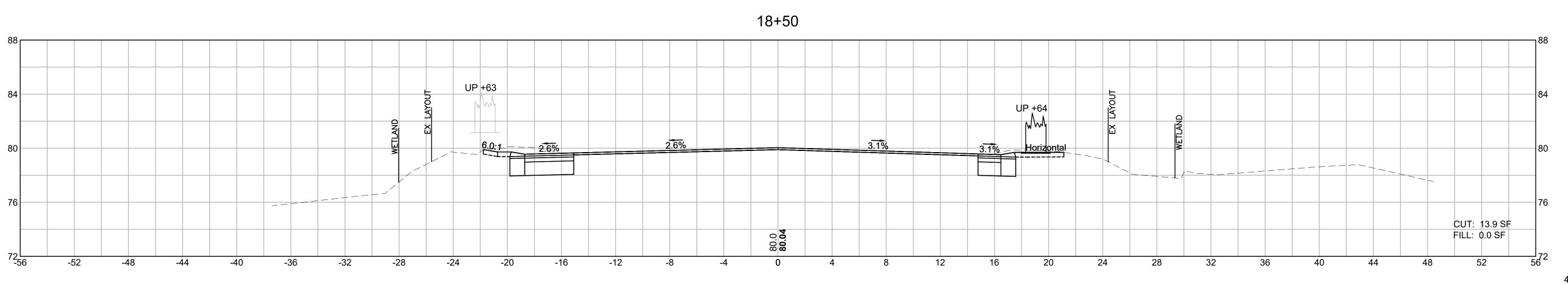


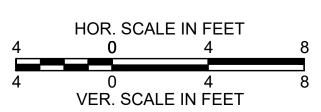


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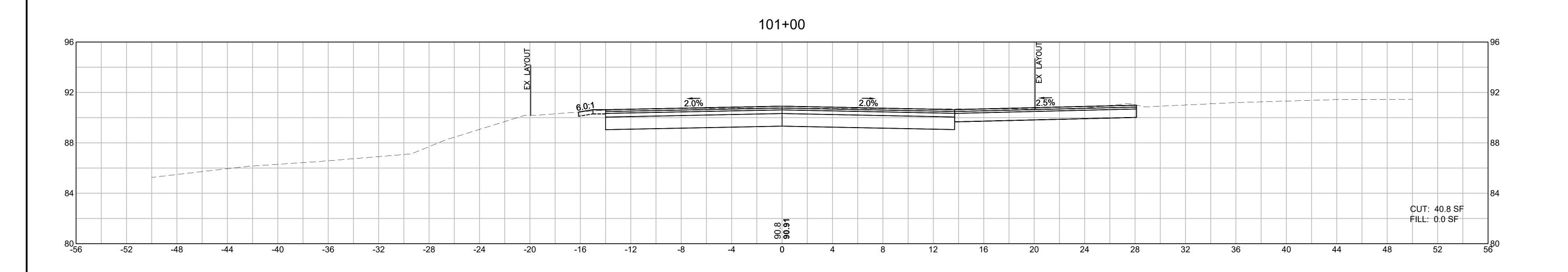


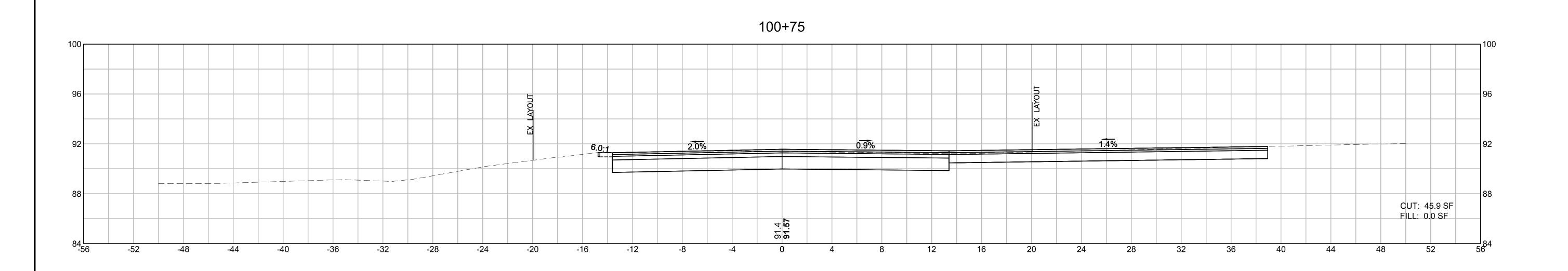


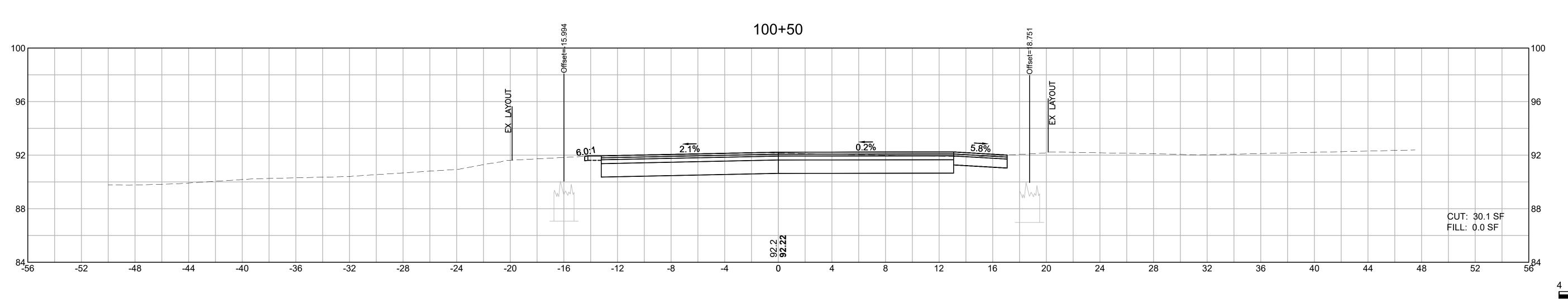


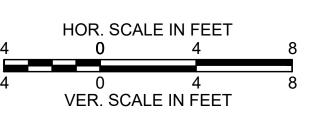




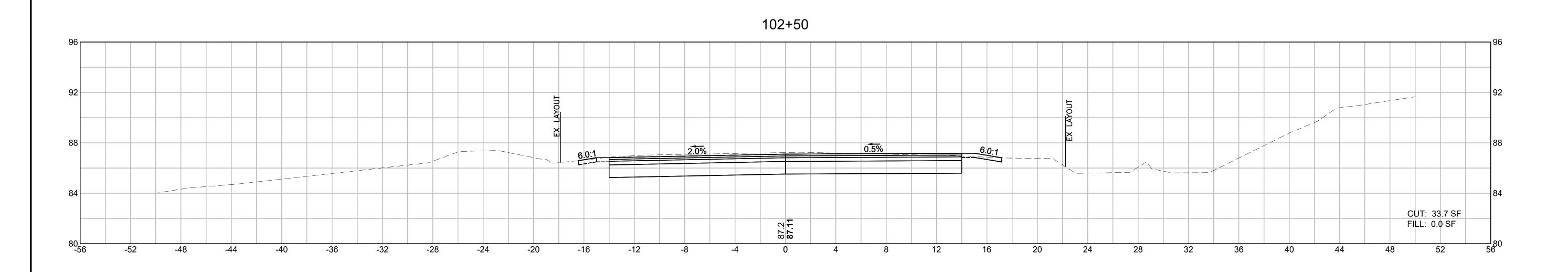


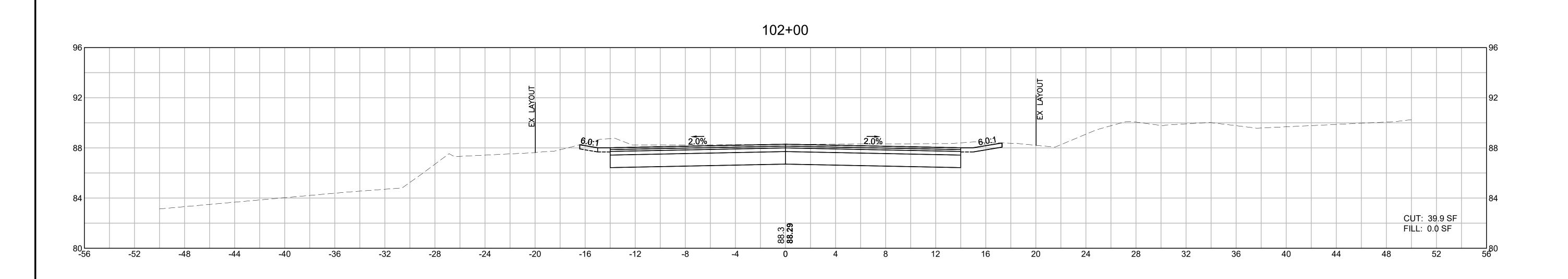


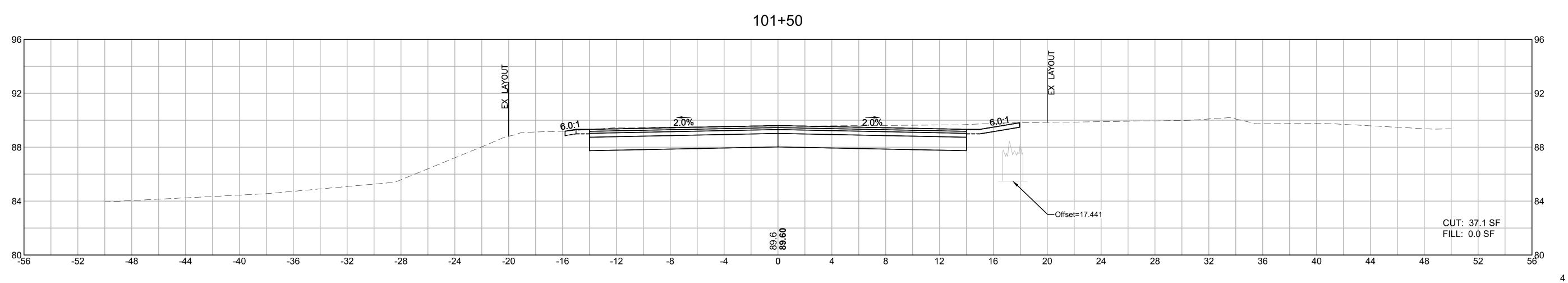


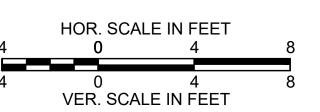










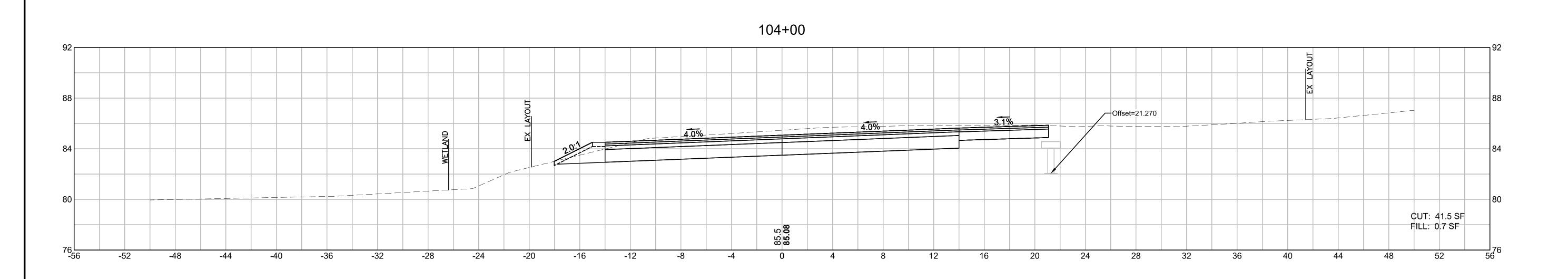


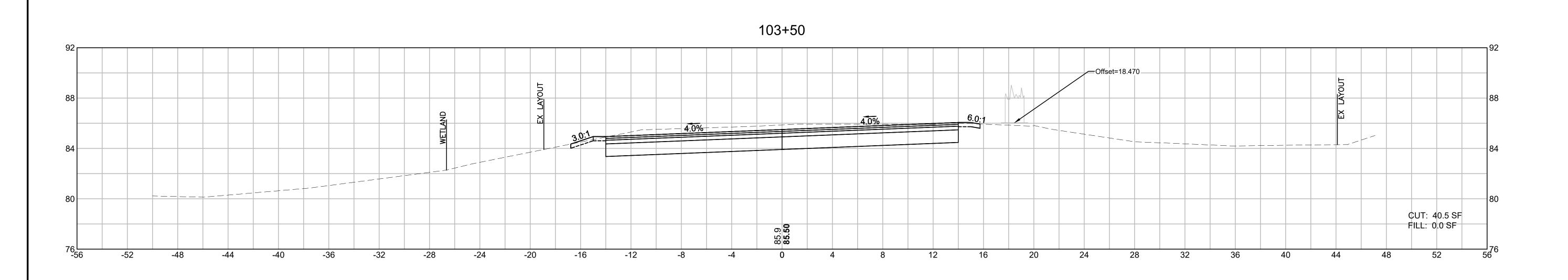
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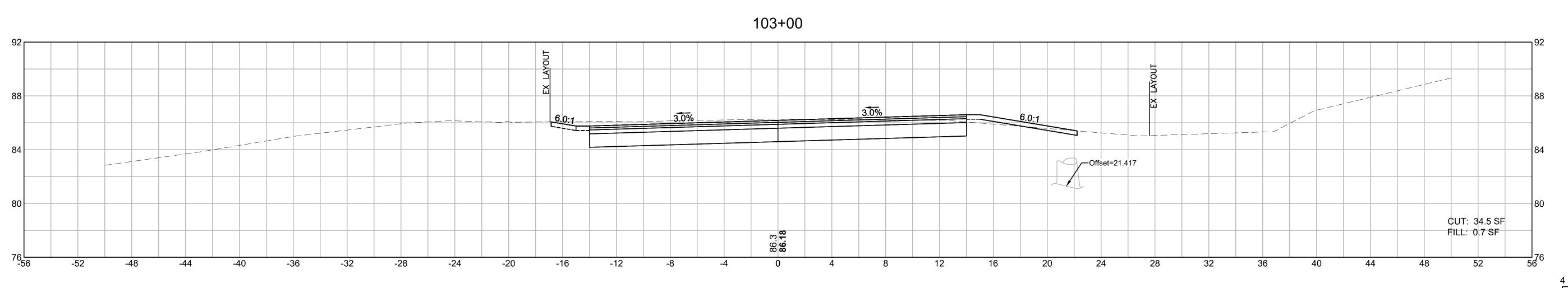
MONTELLO STREET

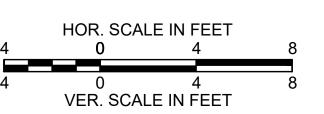
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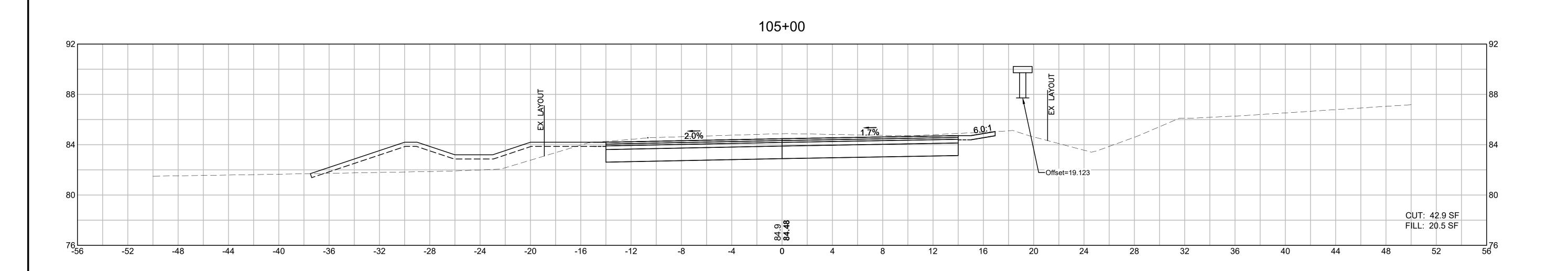


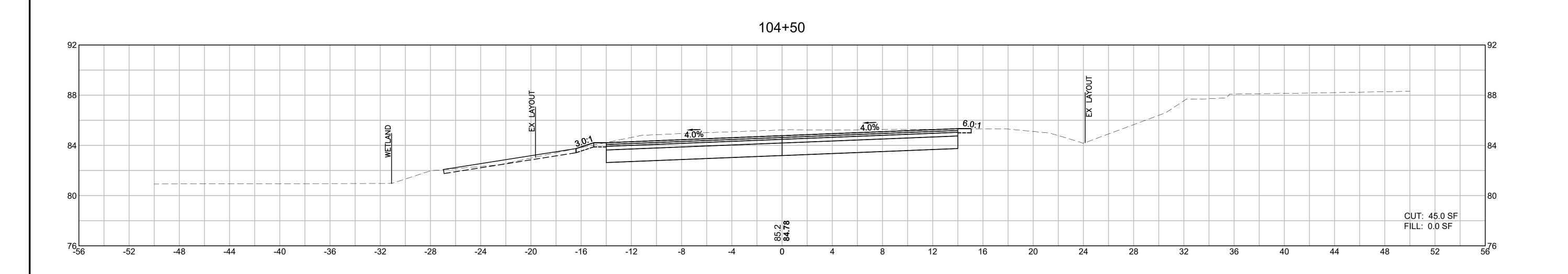
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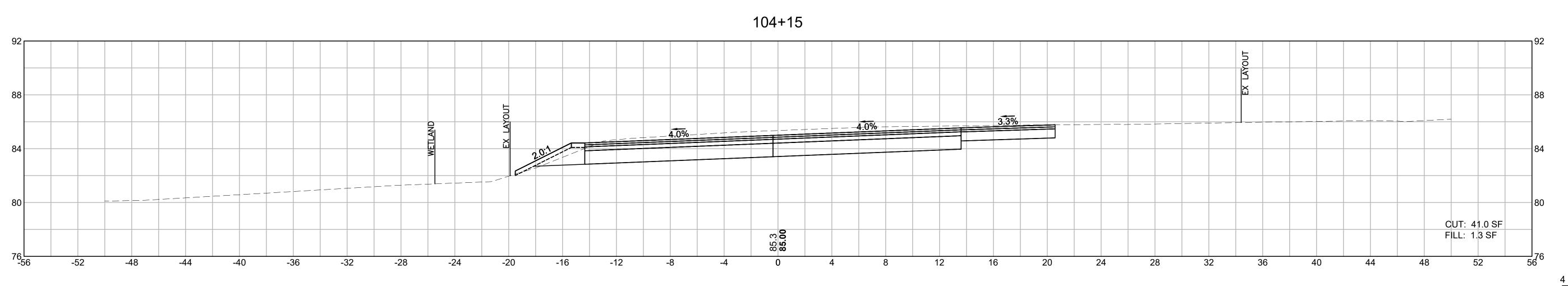
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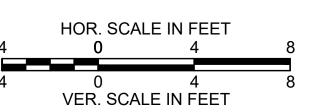
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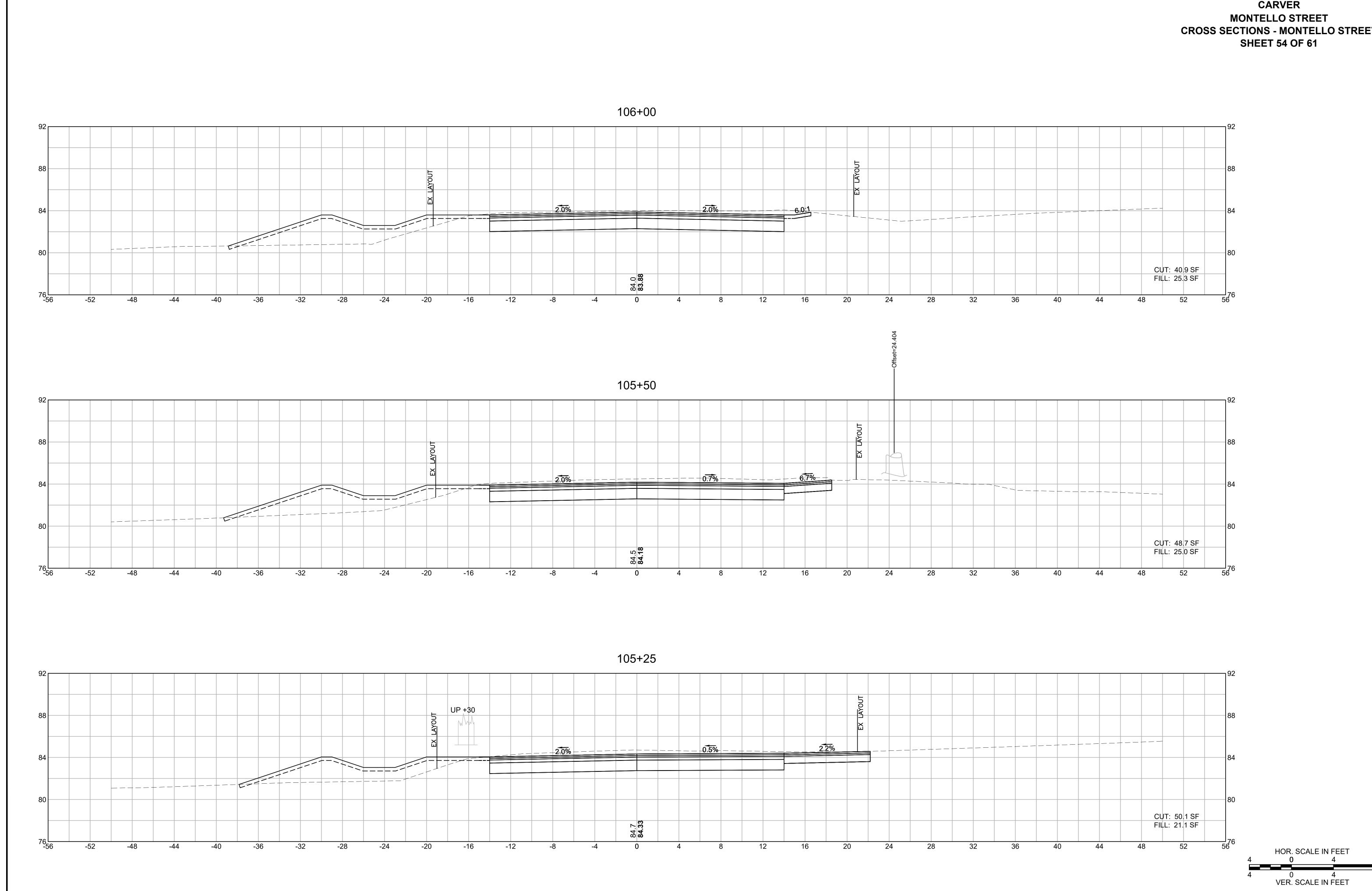




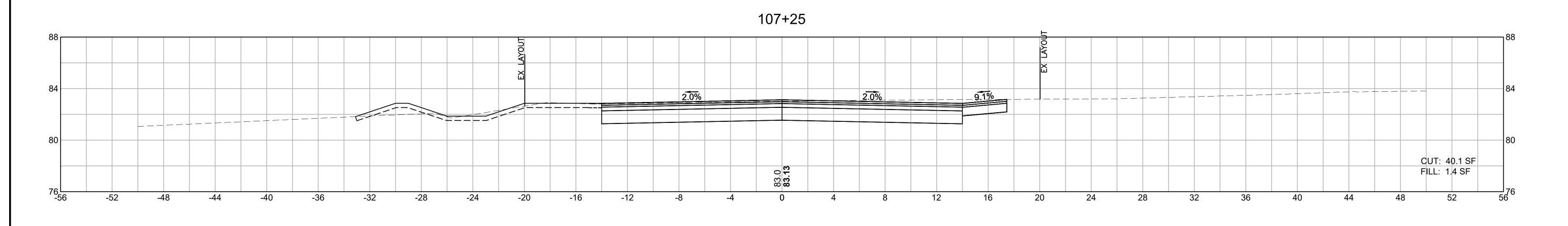


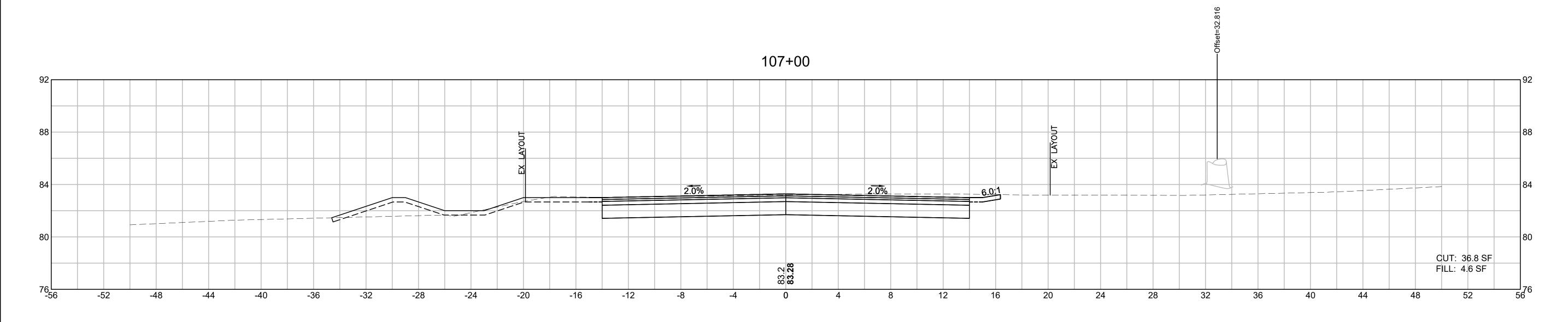


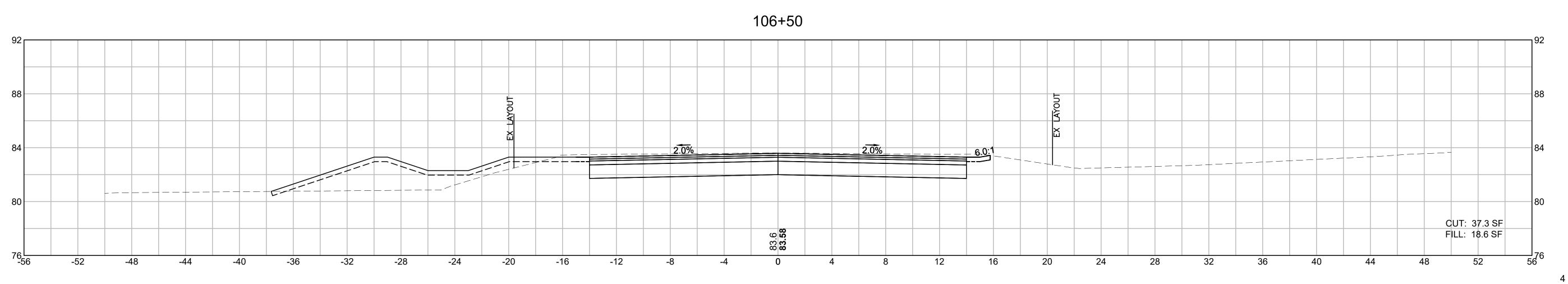


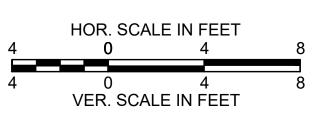


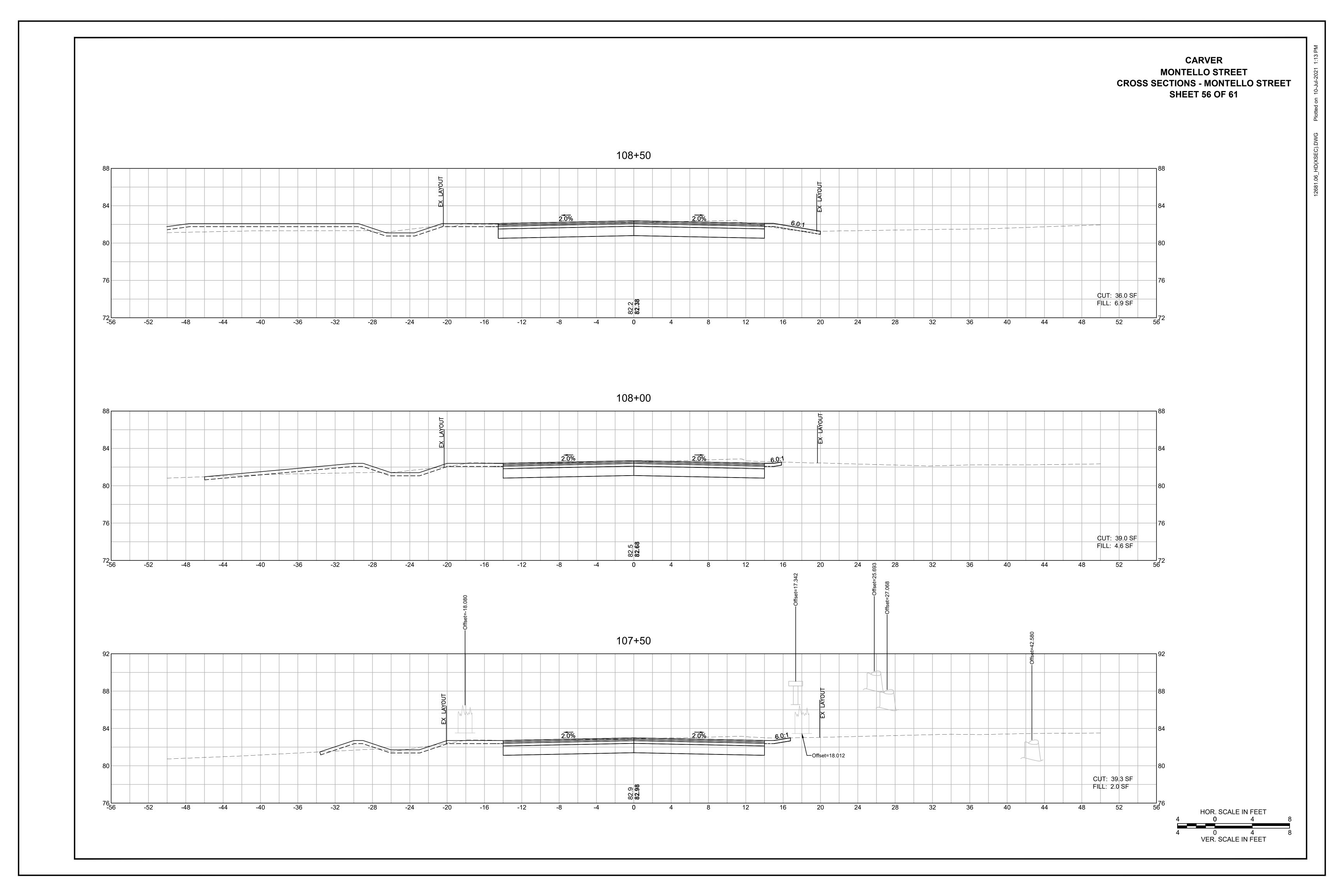
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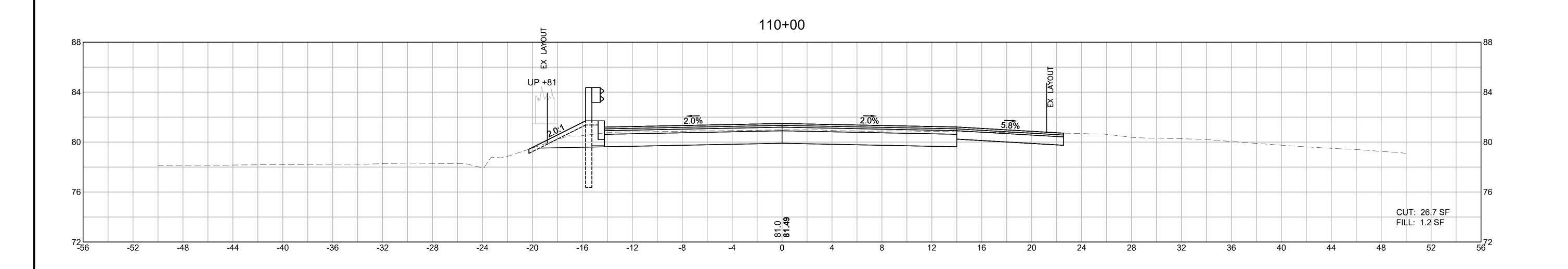


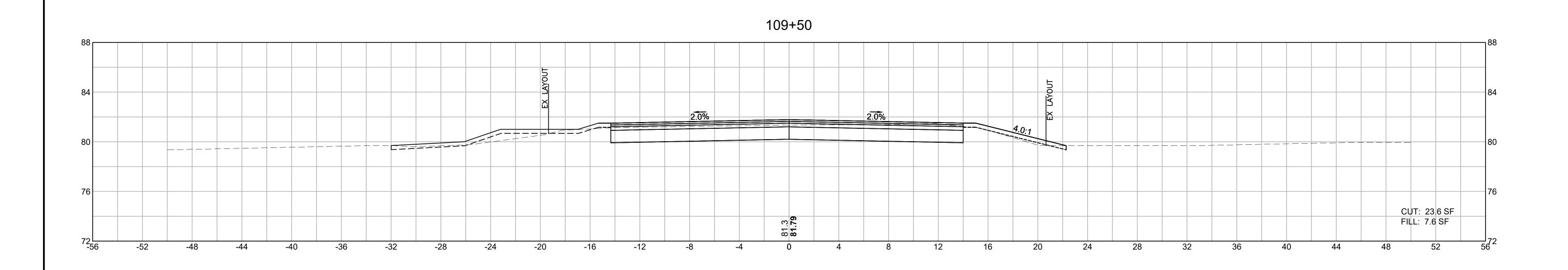
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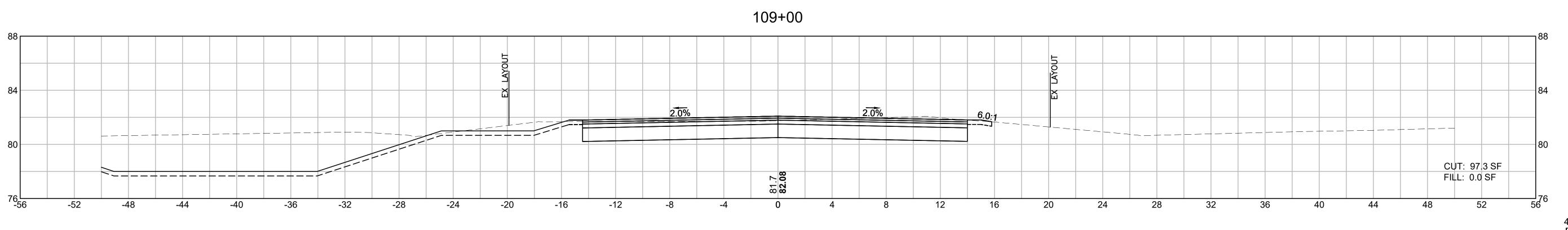
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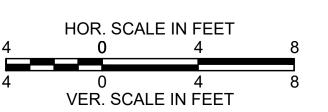
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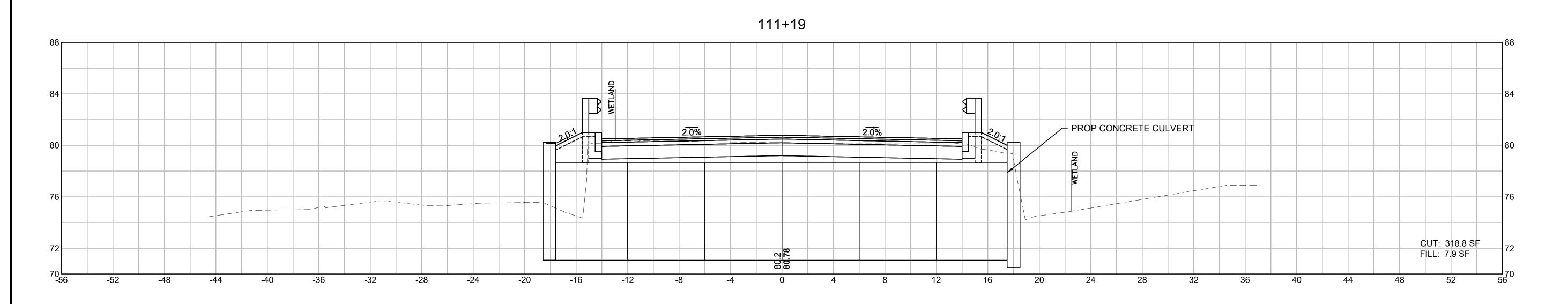


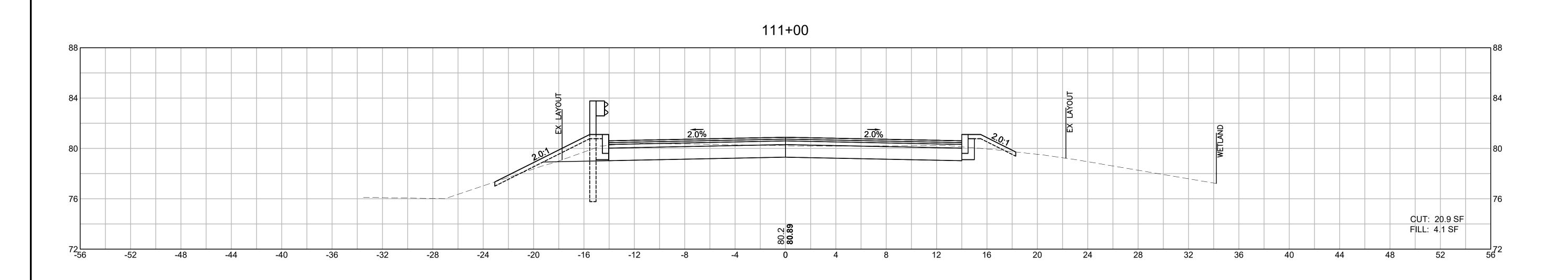
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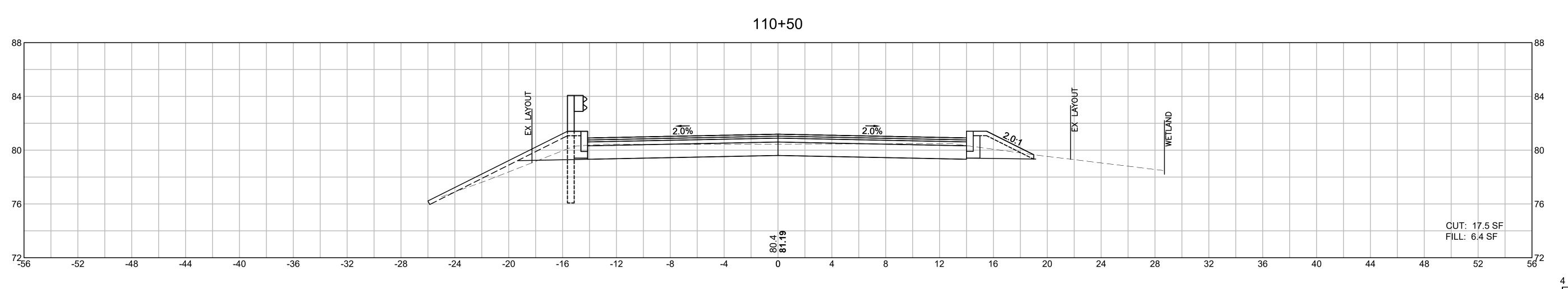
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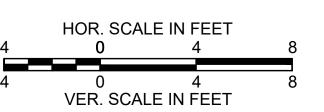
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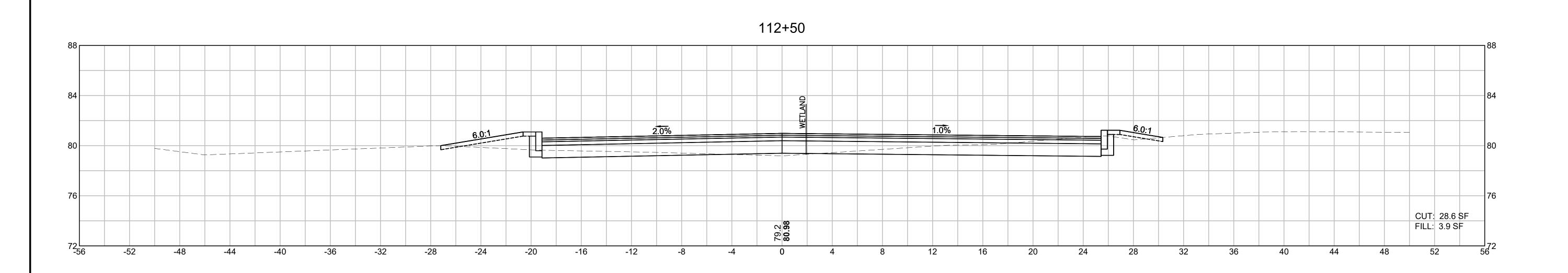


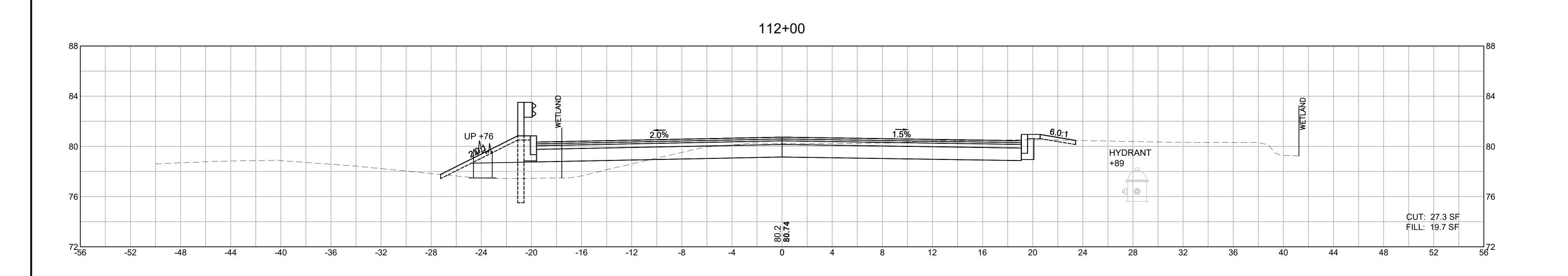
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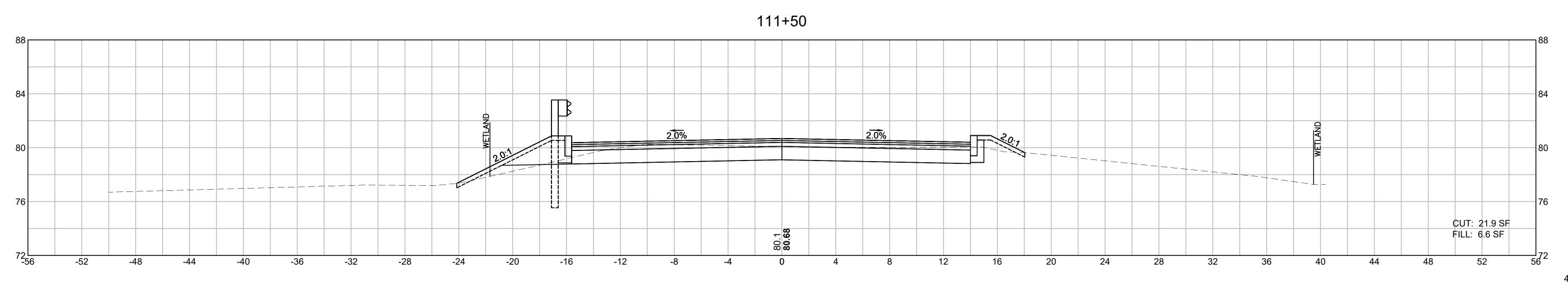
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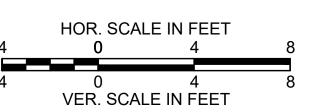
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